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SCIENTIFIC FOUNDATIONS OF BUSINESS ADMINISTRATION

BY

H. A. Overstreet O. W. Caldwell
Thomas Nixon Carver M. P. Follett
H. S. Person Henry S. Dennison

EDITED, WITH AN INTRODUCTION

BY

HENRY C. METCALF

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INTRODUCTION

The Bureau of Personnel Administration published the conferences held during its "Evening Course for Executives" in 1923–24, under the title *Linking Science and Industry*. These conferences provoked the significant demand for more intensive study of the basic elements underlying the problems of business administration and management. The Bureau tried to meet this demand by conducting during the winter of 1924–25 a course on "The Scientific Foundations of Business Administration." This series of twenty-four coördinated conferences with discussions are now presented as a companion volume to the earlier publication.

The present volume, then, is a serious attempt to analyze the philosophical, biological, economic, psychological foundations of business administration and its basic administrative principles; and to apply them to practical business affairs.

"We must learn . . . . to use our methods and our processes, not singly, but together. They are instruments of advance to be employed in combination. The failure to combine them, the use of this method or that as if one were exclusive of the other, has been the parent of many wrongs. Only precariously and doubtfully shall we arrive at the needed combination without the understanding that comes of accurate analysis that is the essential preliminary to any sound and truthful synthesis."[1]

THE PHILOSOPHIC FOUNDATIONS

Dr. Overstreet analyzes the meaning of the philosophic foundations. Does business render a useful social service? Are the human relations in business so narrow as to make the worker's life a humdrum of experience? Or is there equality of opportunity and satisfaction up to the needs and possibilities of the worker? "For those of us who

[1] B. N. Cardozo, "The Growth of the Law." New Haven (Yale University Press), 1924.

are in this field [business] are most distinctly at odds with ourselves. . . . . It seems as if in business one had to suppress his fine wishes and train only those attitudes and skills useful in the strenuous art of commercial getting-the-better-of-the-other."

Hitherto the animating ideas in business have been two-fold,—mere money making, which has brought forth all kinds of anti-social effects; and the property concept—the urge to accumulate possessions. Through our industrial system in our haste for accumulation we have enslaved and dehumanized scores of people. How can we "formulate an adequate business philosophy? . . . . Our motives cannot ever go far ahead of the general conditions of our life. . . . . 'First things' must come first. . . . . Or, to put it into Biblical terms, seek ye first the conditions which make righteousness possible and a greater righteousness shall be added unto you." Dr. Overstreet is confident that the business world has its *ideal* of what it ought to do, what it should like to do. He believes that the animating idea of modern business is the productivity motive. "The basic function of human life is to be fruitful in any of the unnumbered ways that are possible. . . . . Business is increasingly becoming a sphere in which men of integrity and a spirit of public service can find scope for their interests. . . . . In short, business is beginning to give opportunity for motives of scientific-mindedness, serviceableness, and fine human relationships."

Dr. Overstreet sees evidences of business idealism in the education in industry movement which is recognizing ignorance as a social waste; and in the personnel administration movement which is branding the waste of human talent and of human life as a social sin. "We may not safely assume that man can 'live by bread alone' . . . . we live by ideas and ideals, by every 'word of God', that is, by Divine capacity; and we do not truly live until we are free to exercise these capacities."[2]

THE BIOLOGICAL FOUNDATIONS

In the *Decalogue of Science*, Wiggam states that commercial, industrial, educational, religious and political problems, administered

[2] F. M. Bennett, "The Adventure of Faith." In: The Open Court, June, 1925, v. 39, no. 6.

without scientific knowledge of biological and social laws, will practically determine for the masses of mankind abundance or famine, physical welfare or discomfort, opportunities for success or conditions of failure. Wiggam's slightly exaggerated statement emphasizes the need of biological understanding as the foundation for activities in these spheres.

Dr. Caldwell states that: "biological inheritance determines in part men's ability to concentrate and persevere . . . . though the ability to think and act is probably quite as much conditioned by social inheritance." The length to which human learning may go is suggested by the helplessness of the human young in association with the nature of its biological inheritance and the duration of its learning period. "The ability to learn and find out about things is universal in young humans, but in varying degrees." The roads of approach, pointed out by Dr. Caldwell, lead through orientation, specialization, invention and the senses. "Man still learns best through the three senses of speech, hearing, sight; he retains best and most clearly knowledge acquired by sight or sound."

Inheritance is, however, conditioned quite as much on environment as on biological factors. Among the social inheritances of the human race Dr. Caldwell enumerates language, religion, politics, and mental attitudes. This social inheritance or environment is forever changing and "man helps to make the change . . . . Yet to some degree social inheritance can be controlled." The limitations of inherited language, the conventional bias with regard to religious, political and mental standards of thinking can be removed or broken up by "so directing social custom that defective biological inheritance, within very wide limits, may be held in check if undesirable, or developed if desirable, by our social inheritance. . . . . The authority based on scientific facts, the authority of truth, frankness, just relations, these constitute the real authority which modern society must accept and develop."

"Biology applied to everyday affairs will point the way to a new interpretation of the human relations in business and society." It will bear witness to Thomas Huxley's statement that: "Those who take honors in nature's university, who esteem the laws which govern men and things and obey them, are the really great and successful men in this world."

THE ECONOMIC FOUNDATIONS

Dr. Carver maintains that the greatest cause of waste is the narrowing of the stream of human energy. "All the really fundamental laws of economics relate to the enlargement or diminution of that stream." The economic methods of man power replacing itself are "the division of labor which means working together" and the coördination of labor performed either at different times or in different places by different workers. "This coördinating is not done accidentally; somebody plans it and sees that it is being carried out. . . . . This coördination of the efforts of multitudes of men is called in another sense large-scale production."

Dr. Carver describes the capitalistic system as "nothing more than a system of voluntary agreement between free citizens . . . . under which no man shall be coerced and no one give up anything which he has produced, without his consent. . . . . And under which the world has progressed farther in one hundred and fifty years than in all previous times under all other systems." As its most significant phases he emphasizes the increased prosperity made possible through security of private ownership and the diffusion of prosperity brought about through a more general accumulation of capital for purposes of investment. This "diffusion of prosperity carries with it automatically the power to own or control or become partners in the management of industry . . . . this equalization of prosperity obliterates class lines." It will eventually revolutionize our idea of thinking of labor as a "resource" to be exploited and utilized as such, and of the laborer as "different from other people."

THE PSYCHOLOGICAL FOUNDATIONS

If one phase of the industrial problem is "What do you want men to do?" equally important is the question "How will you scientifically control and guide men's conduct?"

In the efforts to better human relations, Miss Follett emphasizes the need of revising the old interpretation of industrial conflict. In her opinion the test of a business organization is not the *number*, but the *type* of its conflicts and the way of solving them. Conflict may result in domination, compromise or integration. To deal

constructively with conflict is to appreciate it as a source of creative life, to look upon it as an opportunity for analyzing, comparing and revaluing conflicting desires. "Revaluing of interests on both sides may lead the interests to fit into each other so that all find some place in the final solution. . . . . Our outlook is narrowed, our activity is restricted, our chances of business success are largely diminished as long as our thinking is constrained within the limits of mere equivalents. Every one of us is really seeking something more than this; every one of us interested in any form of constructive work is looking for the plus values of our activity."

Concerning the giving of orders, Miss Follett believes it as necessary consciously to realize the principles underlying the orders given, as it is to feel responsible for determining how far methods must be changed to meet the principles adopted. An attitude of receptivity must be built up in others so that orders can be carried out. Business administration must conform more and more to well defined principles; authority must rest on proven worth and wisdom. As Miss Follett says: "Orders should be the composite conclusion of those who give and those who receive them; more than this, that they should be the integration of the people concerned and the situation; more even than this, that they should be the integrations involved in the evolving situation. . . . . If orders are simply part of the situation, the question of someone giving and someone receiving does not come up. Both accept the orders given by the situation. . . . . Our first search should always be to discover the law of the situation." To this law obedience will be increasingly rendered because all concerned will feel its reasonableness and its inexorableness and realize their share in being responsible for a functional whole.

Integrative unity in business is attained through improved methods of organization. "Capital and labor must fight or unite. No gentlemanly name for fighting will change the essential nature of the relation between capital and labor in those plants where 'sides are sharply defined.' . . . . Those who prefer to see industrial relations in the fight pattern do not wish to make a unit of the plant." Industry is essentially and must be a coöperative enterprise. Unless treated as such it can never prosper.

Functional unity in business signifies that business problems are in

relation, that is, they must be considered in the light of what is good for the plant as a whole as seen from the point of view of the particular department involved. There is need of developing the technique of "collective creativeness" through team work. Miss Follett utters a timely warning: "Business cannot serve its maximum degree of usefulness to the community, cannot perform the service which it has tacitly *bound* itself to perform, unless it seeks an enlarged understanding of the practical methods of unifying business organization."

In her final paper, Miss Follett defines power also as "self developing capacity, the blossoming of experience." The problem of the workers is "how much power they can themselves grow . . . . how much they will be able to assume; where the managers come in is that they should give the workers a chance to grow capacity or power for themselves." Yet this co-active power should not be given faster than methods are developed for workers to assume responsibility for it. There is no "moral right" to power. Genuine power grows out of actual circumstances inherent in the situation. This means, in Miss Follett's words, not "power over—but power with" and, she wisely adds: "A jointly developing power means the possibility of creating new values. . . . . Not to arrange existing values, but to bring more into existence, is the high mission of enlightened human intercourse."

BASIC PRINCIPLES OF MANAGEMENT

Dr. Person's able and brief historical survey pictures the characteristically individualistic, bold and wasteful pioneer age in the United States and the passing of American frontier industry, due to geographical delimitation and technical appropriation. The immediate triple effect was the need of conserving natural resources, the decline in quality of individual craftsmanship, and the development of large-scale industry. This development brought with it important changes in technique through division of labor and in organization through hyperspecialization of industrial enterprises. Corporate organizations facilitated the pooling of capital, necessitated centralized control and mass production, and favored wide competition.

The second phase of Dr. Person's historical sketch deals with the

management movement, initiated by engineers who turned their trained minds on solving problems of wage and cost systems, and who first realized the relation in industry between good organization with good coördination and regularization. "Scientific management" proper, as developed by the engineer Frederick Taylor, attracted public notice about 1911. This new idea revolutionized industrial management, increased its scope and made its character scientific. Taylor's biographer[3] speaks of scientific management as "an historic instance of inventiveness achieving integration," and Dr. Person affirms that Taylor's concept of shop management "offered to groping industry in its efforts to master the industrial revolution something tangible as to technique and definite as to principles."

The remaining papers on *Major Problems of Administration* and *Major Problems of Management* point out main roads for many who are today seeking their way through the industrial maze. The characteristic feature of administration is that it takes hold of the "exceptional situation" and concerns itself with new organizational procedure involving elements of uncertainty. On the other hand he points out that the characteristics of management are handling the "routine situation" and being concerned with customary, executive procedure.

He considers the establishment, motives and conduct of a business enterprise with due regard to probable industrial trends and opportunities; the relations of such an enterprise to the state, the trade, the workers; and the nature of technical organization and management strictly administrative problems. "The relation to the state is . . . . a problem of industrial group action, but group action is the sum of the action of individual enterprises expressing individual administrative policies. . . . . The attitude of the individual enterprise towards associated effort is an important problem of policy. The individual enterprise may help to constructive achievement or it may be a burden for the trade to carry. And if it is a burden to the trade it will be the one to suffer in the long run. . . . . It is how management, using organization, carries on, that tells the story of administration's decision concerning the nature of the enter-

[3] F. B. Copley, *Frederick Taylor: Father of Scientific Management*, New York (Harper), 1923.

prise, the directing motive, the attitude towards the state and towards the trade, the policy of industrial relations."

Dr. Person states five major managerial problems. They are: utilizing the division of labor, labor-saving machinery and scientific methods; creating social utilities that maintain both the developing industrial and the unfolding social orders; economic operation through eliminating waste and standardizing conditions, methods and labor; establishing good will and coöperation; developing more efficient managing ability. "There is a management problem and a management movement not only because of the changes in industrial conditions which have been portrayed, but also because there is not a sufficient quantity of managing ability competent to understand those conditions and manage in a way to solve the problems they present."

PRACTICAL APPLICATIONS

If the business structure rests on the scientific foundations of biologic, philosophical, economic, and psychological laws, we may be justified in saying that its capstone is the practical application of these laws to business management.

The lesson taught by biology, that inherited social customs of thinking, acting and living may be so directed as to check, modify, or develop biological inheritance, is quite as applicable in the business world. "The powerful influences of industry and commerce," Mr. Dennison affirms, "can be directed upon society for its good or ill. The business manager, as social engineer, takes rank at least with the eugenist and has surely a more immediate chance to help or hinder." The plea of the biologist for frankness and open-mindedness as prerequisites to progress and for education which continues throughout adult life finds its echo among thoughtful business administrators. "The scientific way of thinking brought into commerce and industry means progress—yet it means more," Mr. Dennison continues. "It means the conquest and harnessing of greed. . . . . But the scientific mind must *stay* open and *keep* eager; for it, there can be no finish to education. Education . . . . must go on systematically, intensely and purposefully. Furthermore, it is decidedly to the interest of business management for its own health to see that it does."

The philosophy underlying business administration must teach straight thinking concerning the social value of productive or distributive activities. The accepted test must be the net profit to society. Industrial work can "become an absolutely satisfying and joyous part of life . . . . not by technique alone . . . . but, and only, by keeping high and powerful in the aggregate of business motives the component motive of service. To advance the human relationships of commerce and industry to higher levels, technique and motive must pull along shoulder to shoulder." Mr. Dennison challenges "the business men of America by their faith to make possible and by their devoted efforts to make true the elevation of business management into a great profession."

He believes in experimentation. His experience upholds his conviction that progress in the economic relationships can be advanced by experimentation. The capitalistic system is not wholly "self-righting;" it offers "chances for social invention."

As to the relation between management and men Mr. Dennison feels very strongly that the balance of power lies with the employers "five-sixths of the time," who should therefore be held to their responsibilities. Employers need a more real knowledge of the workers' problems, a more sympathetic understanding that men are men and should be treated as ends rather than as means. Mr. Dennison frankly believes "that, except for some notorious and dramatic but quantitatively unimportant examples, laborers are still too powerless, too much ruled by employers' compulsions and caprice, and have too little of the opportunities and status due to citizens of industry."

The business world offers a wide field for the practical application of psychological theories to the ever changing and ever developing industrial situations. "Prevision is a major canon of the scientific code and business men already know how important it is to see ahead. . . . . Of course, meeting in advance any labor difficulty is much more effective and allows an immensely greater range of action than waiting for the active contest to begin before doing anything about it." But this attitude toward conflict requires that the industrial engineer have, beside prevision, uncommon gifts of inventiveness and experimentation to work out new methods for integrating conflicting significant desires or, at least, for turning them

to serviceable account. In Mr. Dennison's industrial experience the employer's "relation to the employee in the shop is a good deal more a matter of influencing him to do something than forcing him and, when we get that idea into our heads, the whole technique of manhandling . . . . the way in which instructions and orders are given, the way in which the crew is led . . . . is likely to be changed. . . . . If we can get what we eventually must have, leadership . . . . a great many of our present difficulties will be cleared up."

The experience of the Dennison Manufacturing Company with works committees leaves its President to believe that "as developed to date, the works committees offer great chances to contribute to effective management."

With regard to principles of authority, Mr. Dennison emphatically states that: "To confer power or responsibility upon workers without their having the chance to develop ability to carry it, is an almost certain prescription for trouble." He is equally sure that: "The only legitimate authority grows out of the law of the situation. A General Manager is just as much bound by the principles of good management as anybody else. . . . . His 'authority' is principally for use to carry over an emergency when there is not time to thresh out the case."

SUMMARY OF COURSE

And now, at the close of the conferences, Dr. Overstreet asserts that the transition from the "pioneer-mind" to the "engineer-mind" in American industrial enterprise is inevitably modifying basic, prevailing assumptions. The recognition is slowly emerging "that business and industry are fields for the application of scientific intelligence." All parties engaged in industry are coming to feel "joint responsibility for well-being," which presupposes intolerance of any form of economic and human waste. The conviction is gaining ground that business "is throughout a partnership and properly a form of public service. . . . . Here we have something of an indication of the new philosophy of business which is taking shape. . . . . It is one which business itself is generating out of the necessities of its changing conditions. That is the only kind of philosophy

which really counts. If there is much that is admirable in all this, we may have the hope that the . . . . strongly self-interested profit motive which, because of its predominance, still differentiates business from the professions and leads to so much that is ugly, will take a less commanding place." The problem before the industry of the future is actually to reshape conditions and methods so as to enable "business idealism to survive and operate."

Dr. Overstreet believes that the really intelligent and socially-minded person will find business a worthy field of activity. "There is every reason to believe that . . . . business is gradually preparing itself to enter into the fine family of professions." The pride in work for work's own sake, the pride in business as a useful service to the community, is indication of the admirable professional pride slowly growing in strength both among the young men entering upon managerial duties and the older executives, who have grown up in the enterprises they now conduct.[4]

HENRY C. METCALF.

[4] The series of twenty-four conferences on "Business Management As a Profession," which the Bureau of Personnel Administration is offering for the season of 1925–26, is a logical continuation of the 1924–25 course.

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I

THE PHILOSOPHIC FOUNDATIONS: THE MEANING OF "PHILOSOPHIC FOUNDATIONS"

By H. A. Overstreet

What do we mean by the philosophic foundations of anything? When we use the word "philosophic" the initial thought is, I suppose, that philosophy is concerned with rather metaphysical, esoteric matters. Is that what we are thinking of when we talk of the "philosophy of business?" Apparently not. There must then be some other meaning of the word "philosophic."

Perhaps the easiest way to get an understanding is to take an example from another field. Let us take John Dewey. John Dewey is a great philosopher, but preëminently he is a great philosopher of education. When we say that he is a great philosopher we may mean one thing; we may mean that he has much to tell us about immortality, God, the cosmos in general. When we say that he is a philosopher of education, we mean something different. Dewey is famous because he has initiated some new ideas. He has challenged two ideas which have been at the basis of our education in America. Those ideas have been (1) that the school room is something apart from living, only a preparation for later life; and (2) that in the school there must be a disciplinary process to the end that the child be compelled to learn certain bits of information. Dewey has challenged those basic ideas, and brought out opposed ideas of his own. First of all, he says, education must start from the child's own interest; second, education must be not a preparation for life, but a life itself. Those two ideas have begun to revolutionize education in America. In this respect then Dewey is a philosopher, because the type of ideas he has been concerned with are *basic* ideas, basic in the sense that when applied they affect the organization and conduct of the entire system.

If this is what we mean by a "philosophic" idea, it becomes clear

that we can have a philosophy of economics, a philosophy of education, a philosophy of family life, a philosophy of society, a philosophy of politics, and so on. We are then prepared to ask ourselves, what is our philosophy of business? Can we find an idea, a point of view, so basic that all our procedures in business flow from it?

Let us make one remark before we answer that question? When we say that a philosophy is at the basis of our school system, or of our political system, we do not necessarily mean that it is a true philosophy. It may be a very false one. It will, then, be one thing to find the philosophy at the basis of business enterprise, and quite another to decide whether that philosophy is true.

There are, of course, three possibilities. The philosophy at the basis of business life may be false. Or it may be true. Or it may be changing from the one to the other. If we take the attitude that the philosophy at the basis of business today is true, we shall doubtless have a sense that everything has been done that needs to be done. If we assume that the philosophy is completely false, we shall probably have the feeling that nothing *can* be done. If, on the other hand, we conclude that the philosophy at the basis of business is changing from a relatively false to a relatively true, we shall have the feeling that something is being and can be done. That is always the interesting position in which to find ourselves.

Now to our problem. How would you answer the question: What is really the basic point of view of a business man, the idea that shapes all his activities? I asked a student this question today in one of my classes. He said that the basic principle in all business is: "Do unto others as you would have them do unto you; but do the other fellow first." That is one answer.

Another may be found by examining the word "economics." The great father of economics, Adam Smith, called his book *The Wealth of Nations*. It is very significant that in Greek the word *economics* meant housekeeping, the ordering of the household. What is the basic philosophy of a mother who orders the household? It certainly is not to "do unto others as you would have them do unto you, but do the other fellow first." It is to organize and distribute the material goods for the welfare of the entire family. Economics, however, became in our modern days a science of money. The basic interest

of the age succeeding Adam Smith, a period marked by very large industrial and commercial expansion, was apparently not social housekeeping, but rather pecuniary advantage. Nowadays, if we ask why a man is in business, the obvious answer is "to make money." And if we inquire further what we mean by "making money," we find that it means, for many persons, giving as little and getting as much as one can. That, at any rate, is what is constantly being said. As long as it is said we have to meet its challenge. Is that actually the basic principle of business men?

One can easily compare the principle just expressed with what obtains in other spheres of life. Here is an artist. What is his basic principle of life? Suppose we say, "My dear friend, I know what you are doing. You are trying to give as little of your art as you can and get as much money for it as you can." Would he not rise in wrath! Naturally that is not his point of view. As an artist he is eager to give all he can of his art. If he can get enough to live comfortably, well and good.

Again, what is the basic idea in the family? Ask a mother, or a father. The basic idea is mutual welfare; the provision for each and all; a certain element of give and take; a constant process of friendly coöperation. What is the basic idea in political society? The state exists, as a family exists, for the mutual welfare of its members. That is its animating principle. Here, again, is the profession of teaching. Its ethics are that one never sells himself. The teacher cares more about scholarly integrity than about money. It is the same in medicine. The true physician will not go out to make profit if the making of profit means going counter to the fundamental ethics of his profession. He is a physician first and always, and not (as he very often significantly says) a business man. Professional men, of course, do make money; but the chief or basic idea of a profession is that money-making must be secondary to something else. Apparently the professional man is engaged in doing something of social value. It is that of which he is proud.

Has business yet developed a philosophy similar to the prosocial philosophies which we find in the family, the state, and the professions?

One of the important books that should be read is the challenging volume by R. H. Tawney, *Our Acquisitive Society*. Tawney asserts

that the only hope for business is that it become a profession, so that eventually a business man will say: "I am proud of being a business man; business is my profession; I would not demean it for anything."

When we consider business in relation to the whole scheme of life, we note two problems. There is first the problem of the utilities. The war taught us the uselessness of many things and the wastefulness of many kinds of work. So there arose a quite searching question as to what are utilities. Are the things we produce really worth producing? Are the things we sell really worth selling? Is one's business a really useful business? Or is it largely social waste? That is one great question we have to ask ourselves with reference to the philosophy of modern business.

The second problem concerns the human relations. We should regard a family as inexcusably barbarous if one son were dressed in velvet and another in rags. In our families the human relations must be those of mutuality and of equality of privilege and opportunity. In business, on the contrary, we find mutual antagonisms and glaring inequality. We find workers engaged in deadening drudgery; we find persons lacking effective opportunity; we find persons whose whole life is insecure and who, therefore, are dominated by the demoralizing emotion of fear—fear of losing the job, fear of adversity.

So we are confronted by these two great problems in our civilization: the problem of utilities and the problem of human relations. What is the business philosophy underlying a condition where the large production of useless, even of deleterious commodities is the normal, the accepted thing? What is the philosophy of an enterprise in which there are types of human relationships which we would not for a moment permit in our families? Are we right in saying that the basic philosophy of business thus far has been the philosophy of making the most one can for oneself and letting the devil take the hindmost?

If that has been the philosophy, is it the true philosophy? It may, of course, be that we cannot have any other. Perhaps the only possible principle of trading is to get as much and give as little as one can. If that principle is the only one, then there can be no hope of solving our two problems. The business man, being a trader,

will then sell anything good or bad, provided he can get it sold. Again, the business man will hire people at terms most advantageous to himself and without a thought of the welfare of employees or the public.

So, in conclusion, we ask the exceedingly difficult question: Is the trading relation—the business relation—such that it must inevitably bring in its train these antisocial consequences? Or is there perhaps another way out?

DISCUSSION

Question: What do you say to the argument that the difference between the value of what you give and the value of the price you get is made up by service, which in itself has a value?

Dr. Overstreet: Is service the basic consideration?

Question: Yes.

Dr. Overstreet: Then your aim is not to make as much money as you can, but to give as excellent service as possible?

Question: If we did not give an interchangeable service we could not live. The difference between the price and the value of the article is made up by the service given.

Dr. Overstreet: That sounds like a philosophy of service as over against a philosophy of profit.

Question: May it not be a false assumption that a specific article has a specific value in terms of price? A thing is worth more to one man because he needs it and is willing to pay for it, while to another man it is worth nothing.

Dr. Overstreet: In other words, the whole trading transaction is one of mutual benefit and therefore mutual satisfaction. You are necessary to me and I am necessary to you, and each gets out of the other what is necessary to his own satisfaction. What would you say about cheating?

Question: That comes in another field from the principle we are discussing. Of course, you cannot be blind in making a trade, but must satisfy yourself that you are getting something valuable to you, and at least more than you are giving. You may want to sell the man another article later.

Dr. Overstreet: Now we are getting at real reason. If a business man is a perfectly wise person he will sell you a good article in order to have you again for a

customer. Then we might say that the philosophy of the man who cheats you is shortsighted and that the real philosophy of business, if worked out fully, will embody the very principle that we talked about in connection with the family—the philosophy of mutual satisfaction. In other words, the old basic philosophy apparently was, do the other fellow if you can. The new idea is, perhaps not to serve the other fellow, but "it is a little dangerous to do the other fellow because he may not come back." But if you knew he never would come into your store again, would you do him then?

Question: He has friends.

Dr. Overstreet: Yes. So because it is bad business for you, you want to do the right thing in business. I am trying to find the reason in the back of men's heads. Have they the system nowadays because it does not pay to do anything else, or is it because they say, as a physician says, it is not honorable? A physician might be tempted by a large fee to do something that was unethical and would never be found out. I suppose there are two types of physicians; one type would do it; the other would say, no, it isn't honorable. What I am trying to find out is whether we are really coming to the stage where business men are so in love with their profession that they will say: "I am primarily here to give a service. Of course I ought to be paid for that service. But my chief aim is to give honorable service."

Question: Don't you think, so far as it concerns business, that business men will first find that it pays and later on it will become for them a system of ethics?

Dr. Overstreet: You have just said something most important. First we do a thing and find it does not pay. Then we do the thing differently and find it pays. Then we give moral reasons for doing it because it pays—in short, we rationalize. Then we get the habit and like to do it that way; and then we are moral. Perhaps that is what we are coming to right now.

Question: What is the matter with the word success as the basic philosophy of the business man? So many men are referred to as successful. That is the ideal of a man when he starts in business. There are only two courses for him—one to fail and one to succeed. I mean success in every sense of the word.

Dr. Overstreet: That is the question I am asking, in what sense are we using the word? The philosophy at the basis of every man's life is success. Every man wants to succeed—but how does he want to succeed? The artist wants to paint the most beautiful picture; the musician to compose the most beautiful symphony; the teacher to be a scholar. What does the business man want to succeed in? If he wants to make a lot of profit out of other persons; if he wants to drive his employees; then, to be sure, he may succeed, but he is succeeding in something

which we call antisocial. So we come back to our question, what is real business success?

Question: Is it not true that many people regard business as a game? And playing the game, they must play in accordance with the rules of the game. It is a sort of contest and the prize goes to the fellow who does the best.

Dr. Overstreet: Suppose we call it a game. Then the whole question is, are the rules of the game such as to enlist the interest of honorable men?

Question: Many business men have a sense of responsibility, correctly assumed or not, to operate the business in a certain way and manufacture an article, if you will, in the best way. They are responsible to the human beings whom they hope to serve.

Dr. Overstreet: Responsible, not only to the business or to themselves, but to the community. There, of course, you get another conception. It would be interesting to ask whether all human beings do not have a sense of responsibility to something beyond themselves. Does not every man have to think well of himself? No man can look himself in the face and say: "You are a confounded scoundrel, and you know you are." So, I suppose, in business there must be constantly a sense that it is worth while; that success means a success worth having. I suppose that is the increasingly hopeful element in the case of some of our very fine business men. Our problem then remains to find the really animating idea of business and determine what the true philosophy of business should be.

II

THE PHILOSOPHIC FOUNDATIONS: HOW FORMULATE AN ADEQUATE BUSINESS PHILOSOPHY?

By H. A. Overstreet

Since I made the challenge to business last week, I think it is up to you to challenge me tonight. "What have you yourself to offer in the way of a constructive philosophy of business?" Let me justify myself a bit for what I did last week. If we really are to reach a philosophy, we have to be perfectly straight and clear about our ideas. Now, I know of no enterprise in which there is more confused thinking about aims and functions than the enterprise of business. Our recent discussion seemed to show that there is a tendency in business toward the great sport of rationalization. We excuse a great many things we do on really specious grounds, and in the excusing fail to see what it actually is that we are doing in business.

If I was right in holding that one basic idea in business is the money-making idea and that a great many persons in the world are actuated by it, then I think we are justified in saying that the money-making philosophy of business is one which largely prevails.

Let me recall that we described a philosophy as discoverable in the animating idea of any enterprise, the idea in terms of which all functions are performed, all details organized; the idea that sets the pace and direction for the enterprise. We seemed to find that where the money-making idea is the animating idea of an enterprise, all kinds of antisocial results may be expected. For example, if one is in business primarily to make money, the goods that one puts on the market need not be real utilities. For if he can make more money through the sale of nonutilities, or even antiutilities, one's good "business sense" prompts to such a course. Hence an antisocial result. In the second place, if the human relations can be so manipulated as to make a large profit out of the exploitation of labor, or the misuse of life, good

money-making "business sense" dictates such a policy. Hence, a philosophy of that kind almost inevitably leads to many of the anti-social results which we apparently find in our world.

A young man who had just entered business came to me yesterday. He told me of a number of business transactions that seemed to him on quite a low plane. One was typical. A friend of his was boasting of having bought a large quantity of bad butter at a low price, of having sold it to a number of restaurants at a higher price, and of having made a large profit out of the transaction. A most prosocial undertaking! Incidentally he told me of a young student who was taking a course in the "ethics of business" at one of our metropolitan universities and who boasted of the various ways in which he was beating the railroad company on his commutation ticket. Was this an example, perhaps, of the kind of "business ethics" he was being taught?

Now, I am frank to say that a false and mischievous philosophy prevails in large measure among business people. I am also frank to say that I believe a true and wholesome philosophy is developing among business men. The importance of a course of this kind lies in the clarification of our ideas on this very crucial matter. What is the true philosophy of business that seems to be emerging?

Before naming it, let me indicate one psychological fact. I want again to make a comparison between the business man and the professional man. The scientist or artist, to use Hegel's great phrase, *sinks himself in the object.* If he is a scientist, the whole man is sunk in the scientific problem. That becomes his essential life. If he is an artist, his self is sunk in the creation of a work of art. In other words, in such men, the movement of the self is *from within outwards*—toward absorption of the self in an object or objective of high human value. Now such an outgoing process tends to be prosocial because the individual is rescued from what might otherwise be an egocentric absorption. Where, on the contrary, the prime motive is making money, the basic interest may quite easily lie in what the man can get *for himself.* The movement is *from without inwards.* It is egocentric. Thus there are here two diametrically opposite movements of life. The hope of the world is in bringing the business man into the psychological condition we find to be true in the case of the

professional man, the condition where the business man will sink himself in a prosocial object. Let us consider this possibility.

In modern days a great new idea is emerging. What hinders business from coming into its own more than anything else is that the older concept of property still largely governs our life. This concept was most powerful in the agricultural period of society. The obvious thing was to *own* land. The business of life, then, was to *own* as much as one could. The prevalence even today of that concept of property is seen in such a philosophy as that of communism. Communism is simply a philosophy of ownership—ownership in common as over against private ownership. Communism is an inadequate philosophy, precisely because it is based upon an inadequate idea. Nowadays the far more vitalizing concept of "productivity" is coming to the front. Let us see whether it can be applied to life throughout.

We have been saying a great many complimentary things about scientists, artists, and inventors. Why do we say complimentary things about them? Because fundamentally we realize that these persons make productive contributions to society. Their power and their value lie precisely in that.

Nowadays we constantly tend to distinguish between persons who are productively and those who are not productively contributing. On the one side, for example, are the people who put quack medicines on the market; who spend money in advertising goods that are inferior, or that may even be hurtful to society; who sell worthless bonds or float worthless companies. We also tend increasingly to class with such persons those who receive monetary reward for no corresponding activity, what the economist calls "free income." On the other side are the persons who make productive contributions to society in any of the countless ways possible.

If we accept the productivity idea as the ruling idea in every single social relationship, we see very quickly that business can fall into line with all prosocial activities. Where the business man is a producer of real values he has an honorable position in the world. Is the business man actually a producer of real values? The question scarcely needs an answer. The manufacture of an article that is worth while is certainly a prosocial activity. So is the effective

distribution of it. To be sure the business man does not make the same type of contribution as an artist, scientist, teacher. Nevertheless, if he is of the kind above described, he makes his productive contribution.

If we see the matter in this light, we can describe all worthwhile human life as essentially engaged in making productive contributions to society, and all nonworthwhile life as not productively contributory (excluding of course children, the aged and the infirm).

A very significant phrase in the beginning of *Genesis* might, I think, be reinterpreted for modern usage. God said to Adam and Eve, "Be ye fruitful, and multiply, and replenish the earth." Of course, that has been understood for a number of years to mean "bear children;" but we can now translate it into such terms as I have been using. The basic function of human life is to be fruitful—*in any of the unnumbered ways that are possible.* Your abilities may have made you a writer of novels. Are you really making a productive contribution to life through your novel writings? My abilities may have made me into a seller of carpets. There is no reason why you should look down on me because I sell carpets. If we had only novel writers we should have rather uncomfortable homes. In other words, it takes a great many different kinds of people and the interplay of a great many different kinds of functions to make up our world. The essential idea, however, which must run like a golden thread through all this multiplicity, is the idea of productivity. We have then the criterion of value which we can apply to any situation in life.

What would the application of this criterion mean for society? Suppose that instead of having a vast number of people animated by the idea that the great thing in life is to make money and to make it in any way possible, we had practically everyone animated by the principle that a human being has no excuse for existing unless he puts a really productive contribution into the world. Suppose that idea became a kind of religion in our modern life. I am not so sure but that eventually it will become a religion. After all, religion is but our conception of what the universe basically demands of us.

Consider the historic religion in which you and I have been brought up. What did the universe basically demand of us in that religion?

Love—love God, and love your fellow man. Far be it from me to say that that is a poor thing to demand. It is a very great thing. But now we ask ourselves seriously, is that basic concept sufficient for modern people? I for one say no. While the idea is absolutely indispensable, we cannot stop with it. We have to find another great basic principle; and the world, I believe, is now ripe for it to be brought to expression. Why? Because two thousand years ago life was agricultural and the fundamental attitude of man was the thankful acceptance of the goods of life—sunshine and rain, seedtime and harvest. But to-day we live in a creative, reconstructive civilization. We do things to our world. We cut down the mountains; we deflect the rivers; we make new kinds of climate; we do all kinds of remarkable things. For the first time in the history of the world the constructive, creative idea has entered life.

Every religion is born out of the essential conditions of its time. I should venture, therefore, to predict that if and when we formulate a new religion, its basic idea will be the principle of "creating values." The business of life then will be seen not simply as a matter of having relations to our neighbors, but of being a productive contributor to the world in which we live.

Suppose that instead of the money-making we adopt the productivity idea as basic. At once we see what is going to happen in our world. Where a man in business has become habituated to the belief that he has the honorable task of being productive, there are a number of things he is not going to do. Above all, he is not going to put into the world useless goods to fool other people; goods that bring harm or even tragedy into other people's lives.

In other words, the first searching criticism that will come into our society will be a criticism as to the utilities. Business will throw out the nonutilities and the antiutilities. In throwing them out, it will be actuated by the desire which is complementary to the productivity idea, the principle namely of getting rid of all wastes. If our basic philosophy is *prosocial productivity* we cannot permit wastes in goods, in processes, in human labor. Such waste will be a social sin. I should like again to connect this up with the religious thought. A new kind of sin will be recognized—the waste of your own life or of anybody else's life.

What are the two great wastes in our present system? First of all, poverty. In a poverty-stricken family, for example, the talents of children and often of parents are wasted; opportunities are not present; all sorts of degeneration of life takes place. A society actuated by the basic idea of productivity will adopt as its most profound conviction that there must be no condition of life which, like poverty, makes full productivity impossible for that life. Today, on the contrary, with our money-making, devil-take-the hindmost philosophy, we regard poverty quite with unconcern. The productivity philosophy is beginning to express itself in our society. We say nowadays that we cannot afford to allow boys and girls to be ignorant. Ignorance is social waste. So we build schools in order to eliminate ignorance. We are willing, in short, to pay for the salvaging of potential human waste.

Again, we are increasingly attending to the problem of misfits. A great many people are maladjusted to the conditions under which they work. One of the prime stimuli of the personnel movement is the productivity principle, the idea that, in our business and industrial life, we cannot afford the large waste of talent and of power, which the old system permited. So we earnestly address ourselves to the problem of discovering just where individuals best fit. Also, we are seriously engaged in the problem of finding out how we can better fit individuals for the work they do. Education, in industry, is one of the enterprises that has come to stay.

Another indication that I am not speaking of a visionary philosophy merely, is our serious attempt to make mechanical industry less automatic. We are trying to give scope for the fine energizing, creative impulse in industry. In this connection we recall what a number of industrial engineers are doing to introduce the creative element in work, in order to bring out in the worker possibilities and interests not displayed under the ordinary mechanical processes.

We all know a number of men today who in their business are, so to speak, artists, scientists, for whom business is a profession, an honorable undertaking. They bend every thought to make of it a real, worthwhile, contribution to society. If that is true, then we can say that this philosophy we are discussing is actually coming to expression. As it comes, two great changes take place—the gradual

elimination of nonutilities and antiutilities; and the transformation of human relations in such a way that the finest and most effective powers are evoked.

One word about the application of this philosophy to the idea of competition. Dr. Carver in one of his books unfolds an idea quite in line with the thought thus far developed. A good many people think of competition as bad. Dr. Carver shows that there are two kinds; productive and unproductive competition. The one he calls competition in bargaining and the other competition in production. For example here are two competing farmers. One farmer goes to the railroad freight office and by various unmentionable means succeeds in getting special privileges in freight rates. That is his antiproductive, antisocial way of competing with the other man. The other farmer studies farming as hard as he can; gets the best seeds, learns all about soil, fertilization, and raises the best kind of crop. He is also competing; but he is competing in terms of the basic idea of producing the best he can.

The same thing might be true of two grocery stores, where the one man competes by trying to run down his rival, and the other competes by seeking to give the best service. Competition is the soul of business, as of life. Now, if you get the philosophy that I am attempting to outline, you can easily judge that the question of true or false competition depends on whether the basic idea is *production*, the making of a worthwhile contribution to society, or *profit*, the making of as much money as possible in any possible way.

The interesting fact about our present civilization is the great fight which is taking place between the two master ideas we have been discussing—the principle of money-making and that of productivity. Personally I believe that the odds are against the money-making principle. Why? Because the whole structure of our human life is on the side of productive service, productive contribution. The whole force of our life is against the evil type which takes values out of life. So that the future is with the philosophy of productivism. But not only is the future with the philosophy of productivism; I frankly believe that what we now today recognize as fine business, whether it knows it or not, is basically animated by this philosophy.

DISCUSSION

Question: You spoke of being a salesman of carpets. Do you consider that a productive activity because you are rendering a service to the buyer of the carpet?

Dr. Overstreet: Yes, and because a carpet is an essential type of human goods. Of course as soon as we adopt a philosophy of this sort we have all sorts of problems that are not always easy to solve in individual cases. We have to confine ourselves rather to the question of the general trends of society. For example, in my own field of teaching, suppose I were to go out upon the Campus at the beginning of the term, ring a bell, get the men around me and say "I am going to give a very splendid course this term; the fee is quite small, really smaller than fees in other courses. How many men want to enroll in my course?" That would be considered very queer. Something like that, however, used to be done in Oxford. It was all right for a professor to hire a "tout," who went out among the students and tried to drum up trade. It is not done any more. So, again, in old days the tax collector was a man in private business. He had a contract, paid the government so much, then went out and squeezed all he could out of the people. That has stopped. When I was a boy in California, we had not yet adopted the one-price system. Now we have. That is the way the world goes. There are general trends. I think the trend toward productivity is one of them.

Question: The stigma which you placed on business last time in contrast with professions, the home and politics, of getting all you can and giving as little as you can, does not seem applicable to business alone, but to be a condition of selfishness which exists through all groups of society.

Dr. Overstreet: Quite right. In the family we have the selfish parent and the parent who is interested in furthering the welfare of his children. In politics we have the self-seeking politician and the loyal statesman. So in all our institutions we find the two opposed ways of life operative.

Question: Do you think that business and industry are such controlling factors in social life that if this philosophy comes to dominate business it will control the other phases of social life and eventually change the whole spirit of the times?

Dr. Overstreet: I think so. Business and industry are the dominant factors in our modern life. Children, for example, are living in a world that is advertising, selling, buying. The spirit of that world becomes the spirit of our children as of our adults.

Question: If we eliminate waste by whatever scheme; if we control individuals from whatever motive; if we drive out the quack doctor and shyster lawyer; if every fellow must do the right thing; will that put such a curb on the individual, and the world become so sweet, that it will not be interesting?

Dr. Overstreet: I come back to Dr. Carver's illustration that fighting is necessary to the last drop of the hat. Competition! But I think you can have the most vigorous kind of competition where you are sharpening your talent all the time and do it on a high productive basis.

Question: I have some difficulty in conceiving the philosophic idea of productivity as entirely antagonistic and opposed to the money-making idea. It rather seems to me that the money-making idea must still obtain. You have to save up; that is, you have to invest the results of previous labor which we call capital.

Dr. Overstreet: Cannot we answer by saying that money-making must be our technique; productivity our motive? We need our money-making technique. We cannot be very productive when we are financial failures. That is why the old Biblical conviction that being rich was a bad thing and being poor was good is utter nonsense.

III

THE BIOLOGICAL FOUNDATIONS: PROLONGED LEARNING PERIOD IN MAN

By O. W. Caldwell

(Outline)

SIGNIFICANCE OF BIOLOGY FOR INDUSTRY

1. Biological inheritance determines many things in business. Each person is inclined to interpret life from point of view of his own chief interests and of other people's interests as radiating from his own. On the precept that men should learn to think of all human thought as radiating from themselves, the comment may often be made, "That's the trouble; they do."

2. A. E. Wiggam's *Decalogue of Science* names biology as the foundation of business, industry, education, religion, politics. Activities in these spheres are handled by managers, usually called statesmen. By administering problems in relation to biological matters, these men practically determine abundance or famine, physical welfare or physical discomfort, opportunity for success or conditions of failure for the masses of mankind. This state of affairs is largely due to lack of sound scientific knowledge concerning biological and social laws. Wiggam's statement maybe slightly exaggerated, but it emphasizes the need of biological understanding of common affairs.

SIGNIFICANCE OF BIOLOGICAL INHERITANCE IN MAN

Biological inheritance partly determines what men think and how they act. It determines moreover in a high degree whether men can learn to think consecutively, uninterruptedly, purposefully; it determines in part men's ability to concentrate and persevere. These are among the chief faculties which single out the successful person from the ineffectual.

Uninstinctive action

Illustrative case: $1800 employee; fair experience; on trial in first position. Could give no clear, direct answer to questions. Would answer in terms of something else. Would wander from topic. Proved in particular activity to be fitful, flitting, divergent person. Had to be released from duty. Characteristics explainable through certain biologically inherited facts plus some things in social inheritance.

Ability to think and act is probably quite as much conditioned by social inheritance, or the influence of environment, as by biological inheritance.

SIGNIFICANCE OF BIOLOGICAL INHERITANCE IN ANIMAL

Instinctive action

Illustrative case: California wasp. At a certain time in summer this wasp cuts a tiny disc out of the salt-crusted sand and hides it many feet away. She returns to the point where the disc was cut; digs out more sand; flies away with it and drops it out of sight. This performance the wasp repeats until the hole cut is about $5\frac{1}{2}$ inches deep. Then she finds the disc without hunting for it; carries it back; moistens it; slips it into the hole sealing it tightly and almost invisibly. She flies away and later returns with an inch worm, paralyzed by her sting; uncovers the hole; drops the worm into it and reseals the den. This performance she repeats until the den is filled to near the top. The wasp lays a small white egg on top of the last worm, then seals the den and never again returns to it. In time the egg hatches into a wasp which feeds on the supply of worms and so makes room for herself. After the food is gone, she spins a cocoon, and later emerges as a new wasp, indistinguishable from the parent wasp. The life cycle of this new wasp, if a female, runs in the same sequence as that of the parent; fertilization; egg development; locating and preparing its sand den; provision of food for young; depositing the egg; sealing up den. It is the story of the complete and blissful inheritance of the ability to do a series of acts in perfection. To disturb the wasp at any stage in her performance results in her (1) never

laying the egg; or (2) starting the whole series of acts anew, irrespective of the work done up to that point. The wasp is actuated toward this cycle by what we call "instinct." The wasp can neither adjust nor learn, and we do not know how the first wasp came to act in this way.

BIOLOGICAL SIGNIFICANCE OF LEARNING PERIOD

1. *Inheritance of the colt.* The colt gets up and walks within ten minutes of its birth. It takes food within half an hour of its birth. Within two hours it tries to run. Within three days it attempts to trot or pace—if a descendant from the famous "Messenger" line. Within one year it may know how to keep out of and ride down a barbed wire fence; it may know its friends and its enemies. Within two years it may rack; it may gallop; it may trot or work in harness; it may have acquired "horse sense." Yet in its early life the colt cannot tell its mother from any other horse, nor a barbed wire fence from the air, nor friends from enemies. The colt inherits ability to learn.

2. *Inheritance of the fox.* The young fox is more helpless than the colt. It learns to walk only several days after birth. Away from the mother animal it perishes for lack of food. The fox's ability to learn is in terms of its helplessness at birth. Its learning period is longer than that of the colt, but it learns more—learns to hunt, to fight, to wait for prey, to plan, to be sly and shrewd.

3. *Inheritance of the human young.* The effective capacity of the baby is very low. It cannot feed itself even with food available. The helplessness of a baby is so great that the mortality rate for babies is higher than for the young of a farm animal. The nature of a baby's helplessness is hardly understood or appreciated by the mother, who usually learns to take proper care of the child after the need is past. Caring for the human young is not a biological inheritance. The human race has developed no system of recording and transmitting to future generations the information and knowledge learned by earlier generations on the care of infants and children. Many groups of people are working on the problem of transforming this knowledge into a social inheritance.

LEARNING POWER

1. *Start.* *When* does the human young begin to learn? An infant, a few days old, will turn towards or away from the light. The same infant learns soon how to protect himself from his surroundings. Babies learn thousands of things to each one the colt or the fox could learn.

2. *Rate.* *How rapidly* does the human young learn? During the first three years of life a child leanrs at a rate that cannot be matched in later years. If adults could keep up learning at that rate to the age of the youngest person present, Solomon's wisdom would have long been surpassed.

3. *Duration.* *How long* does the human race continue to learn? Child starts in school when six years old; stays eight years in elementary school, four years in high school; four years in college. Then comes graduate work. Afterward people settle down in business. "Settled down!" That expresses the adult man's attitude too often. It is synonymous with routine. The more routinized anybody's life is, the less he is learning.

HELPLESSNESS VERSUS LIMITS OF LEARNING

Poincaré's statement that man is the instrument of his own measure signifies that the helplessness of the human young, in association with his prolonged learning period and the infinite number of things he may learn, merely suggests the length to which human learning may go. There is no limit to the knowledge man can attain. The ability to learn and find out about things is universal in young humans, though in varying degrees.

ROADS OF APPROACH

1. *Orientation.* The nature of biological inheritance, the habit of continuing to learn, enable the human mind to reach out. Man can learn to know history, literature, science. The human young stands in the center of available things to be learned. He is interested in his environment. He wants to know everything; get acquainted with all types of knowledge. His way of orienting himself is to ask

What? and Why? These are perfectly logical questions for the human young during the period of his getting acquainted with his environment. Impatience of parents or other adults blocks his progress. Story of inquisitive office boy who was told: "Shut up, or you will lose your job," when he was trying to learn about his job.

2. *Specialization.* At later age man begins to specialize in one kind of knowledge. He learns to differentiate between quantity and quality. If he is productive he continues advancing along his chosen line, which may be business or any other profession. Up to the time of specialization man knows something about all things. This is an interesting fact about our notion of knowledge. At beginning of business or professional life, man's knowledge is described by his own radius. All lines of knowledge go out as far as his own. Soon he forgets that others specializing in other lines have gone quite as far as he from the original center of knowledge.

3. *Invention.* Invention has pushed back the boundaries of human knowledge. Illustrative example: discovery of helium. Study of spectral analysis discovered a new band of color due to an unknown element in the sun, not yet recorded on earth. New substance was called helium. By synthesizing knowledge man then found helium on earth, discovered it to be one of the chief constituents of waste from burning gas. Study and invention are marks of a progressive age in business as in mechanics.

4. *The senses—speech, hearing, sight, touch.* The senses of sight and touch are biologically closely related to the nerve system. Man still learns best through three senses of speech, hearing, sight; retains best and most clearly things acquired by sight or touch.

In hearing Thoreau's description of the Concord Hills, you repicture the scene in what you have seen. The senses of touch, hearing, smell and probably the sense of taste, depend upon vibration. The radio is but another new sense, a new ear or eye, recently developed by man. There are enough various vibrations between those giving the senses of hearing and sight to make up a hundred different receiving organs. Men may succeed in producing sense organs, like the radio, which nature omitted.

METHODS OF DEVELOPING BIOLOGICAL INHERITANCE

Biologic capacity is developed through educational methods.

1. *Memorizing.* College entrance examinations are now considered to be chiefly matters of memorizing. Member of college entrance board stated that the ordinary college entrance examinations are too easy when more than $66\frac{2}{3}$ per cent of candidates pass. Biologically and sociologically it is true that growth can come only when a measure of success may be achieved. Man usually learns through success. Unless he *can* climb, he will stop *trying* to climb. There is failure enough without providing for one third failure.

2. *Habit teaching.* Certain things the human young must learn to do as efficiently as the wasp does its task. Among these things are: capitalizing the first letter of a sentence; crossing the *t*; dotting the *i*; doffing your hat when meeting a lady; saying thank you. These and many other things man must learn to remember to do properly, to do unconsciously and in almost a reflex way. Whoever is not constantly increasing the number of things to be reduced by habit, will make little progress on his particular radius of knowledge. The purpose of habit teaching is to liberate man's real thinking power for reaching out toward new attainments.

3. *Reading.* Literature is the record of the world's accumulated knowledge. Reading is one means of developing inherited capacity. Story of the man who read twice the *Encyclopedia Britannica*, then started on Webster's *Unabridged Dictionary*. His working theory seemed to be that the value of his education would be proportionate to the amount he acquires of this recorded knowledge. Yet it is not how much of it has lodged in, but how much has worked through his mind, that will determine how well educated he is. Analogy of stock of knowledge to ball of yarn used for knitting. Some people's knowledge rolls like a ball anywhere you pull the thread, because it has not worked through their minds into an organized and useful system of their own. Knowledge must become a means, not an end, to the man who realizes his power for new development.

SIGNIFICANCE OF SOCIAL INHERITANCE

Social inheritance, the influence of environment, man takes over by means of his biological inheritance. Among things socially inherited are:

1. *Language.* Language ranges all the way from the biggest shot gun loaded with bird shot to the finest rifle shot with one effective bullet. That is, people speak in general terms or with exactitude, precision. The standard of intelligence in any business office, for instance, may be gauged by the quality, and the quantity of the vocabulary used by the office and administrative forces.

2. *Religion.* The majority of people inherit ideas about religion.

3. *Politics.* Ideas about politics were inherited formerly; a man voted as did his father. Some still do. It is only recently that we have begun to break away from our inherited politics.

4. *Mental attitudes.* E.g., toward ways of thinking, attitudes toward gossip, toward coöperation, unselfishness.

REACTION TO SOCIAL INHERITANCE

Social inheritance, or environment, is always in a state of flux. Man helps to make the change. If any one individual contributes much toward changing his immediate surroundings, the majority must then do little. Yet to some degree social inheritance can be controlled by groups and by dominant individuals.

1. *Migration.* If changed environment does not suit man, he can move to new regions where the demand fits his need.

2. *Adaptation.* Man can remain in changing region; help change it; learn different modes of living.

3. *Stagnation.* Man can become fossilized, walking around as a living record of the past; or he can die, e.g., this reaction to social inheritance is aptly illustrated by the story of the great black-soil swamps of the central states. When these swamps were being drained, their animal and plant life was faced with this three-fold choice: (1) migrating toward Iowa to the same kind of swamp, where conditions fitted their type of life; (2) staying in the changed region and possibly undergoing structural changes in the attempt at adjustment. Many such changed animals and plants are still surviv-

ing and found thriving in their changed environment; (3) ceasing to exist, their bodies falling down, becoming fossilized, and being dug up later as records of the past.

DISCUSSION

Question: Is there any great variation in the ages in which children begin to take a selective interest as distinguished from a general interest? Which is more likely to last?

Dr. Caldwell: The age range shows very great variation. Selective interest may appear at eight or nine years of age and, again, may not appear until after twenty. The interest developed later abides. We had a conference yesterday about a nine-year-old boy who is studying plane geometry. His father and mother are both mathematicians and think he has inherited mathematical ability. I do not think that boy can be a successful mathematician or anything else, being educated as he is. That is an extreme case. I believe special aptitudes which children seem to show at that age should be encouraged within limits, but care should be taken to expose children to a number of other things, or we are limiting the child.

Question: Perhaps that is why prodigies so often fail.

Dr. Caldwell: I have a note on that. It is a tragedy happening to a great many of them. A friend of mine has a boy who graduated from one of the better high schools in California. The boy had a remarkable ability to learn lessons. His parents kept him out of college for a year traveling through Europe with him trying to mature him. He had to recite lessons on the trip. When he went to college and was away from home he failed in everything. He is an extreme smoker of cigarettes and went to pieces morally for he had never a chance to develop moral control at the proper time for it.

Question: One reason that apparently prevents children from learning is the fact that it is not popular among their school mates. The social environment in the best of schools tends to keep a fellow from learning because he does not want to be out of fashion.

Dr. Caldwell: I think that is true in substance. Of course, our colleges throughout the country are the chief offenders. They have developed an atmosphere where it is not respectable to be an outstanding scholar, though that is changing at Harvard. I wonder if in offices it is not the opposite, however. Isn't it respectable there to be known as being very efficient, or are you in bad if you know something?

Question: There is a good analogy. Is it not true perhaps that success in schools

depends on memory rather than brains; whereas in offices it depends on what you can do?

Dr. Caldwell: Why should not college standing also depend on what you can do?

Question: Is there not a general tendency to regard efficiency as not popular or against the prevailing fashion? A man who lays too many bricks is not popular with his union; a boy who studies too well in school is not popular; a dead level of mediocrity being preferred. In business today, the cold-blooded efficiency man on one particular line is not accepted as much as some other fellow who is not so good, but more of an all around man.

Dr. Caldwell: I wonder if that is affected in any way by the fact that so many more people enter education and business compared with those who used to. No other country has anything like the proportion of its people in school or in business. We are trying to educate everybody now to be efficient. We may have pulled in many people who lack the inherited needed qualities.

IV

THE BIOLOGICAL FOUNDATIONS: THE CONTROL OF OUR INHERITANCE

By O. W. Caldwell

(Outline)

INTRODUCTION

1. Clifford, mathematician, philosopher, scientist, comments: "The aim of scientific thought is to apply past experience to new circumstances. The instrument is an observed uniformity in the course of events."

2. Carl Pearson says: "Modern science, as training the mind to an exact and impartial analysis of the facts, is an education especially fitted to promote sound citizenship."

3. Darwin states: "I have steadily endeavored to keep my mind free so as to give up any hypothesis, however much beloved, as soon as facts are shown to be opposed to it."

4. Thomas Huxley says: "Those who take honor in nature's university, who esteem the laws which govern men and things and obey them, are the really great and successful men in the world."

THE CONTROL OF OUR INHERITANCE

Possibly the lecture topic might better be stated as "What should society do about it?"

Inheritance is conditioned on (1) biological factors; (2) environmental factors. Some people believe they have inherited certain fine qualities from parentage when they are secured from environment. Whether men are what they are primarily because of biological inheritance or because of social inheritance is an old and but partially answered question. Comments encountered in the placing

out system of children by State charity organizations: (1) "I do not care what kind of child you give me, so that he is sound in body; I do not care if his father was a drunkard;" or (2) "I don't care if his father was a murderer, if he is intelligent and has a good body. Environment determines what is going to be made out of this person. If he has a good body and mind enough, he may succeed."

IS BIOLOGICAL INHERITANCE CONTROLLABLE?

A. Illustrations from animal life

1. *Trotting and pacing horses.* In 1913 "Uhlan" set the pacing record of 1.54 for the mile behind a windshield apparatus which greatly assisted his movements. "Dan Patch" set the pacing record of 1.57¼ without assistance of a windshield. "Peter Manning" set the trotting record of 1.56¾ for the mile.

Most outstanding pacing and trotting horses came through the famous "Messenger" line. "Alix," a descendant of "Messenger," who was propotent in transmitting his characteristics. "Alix" had 290 recorded ancestors, 65 closely associated in descent from "Messenger" and his line. Among "Messenger's" descendants are 170 out of 180 of the trotting horses recorded in the 2.10 class; and 146 out of 150 of the most famous world pacers listed. Certainly speed in race horses is partly a matter of inheritance. Apparently, to develop a good race horse, buy "Messenger" blood and you may get it. Under the block one can sell a "Messenger" descendant on the strength of that fact.

2. *Guernsey cattle.* At a recent Guernsey cattle sale a famous bull sold for $10,000. The owner declined a private offer of $15,000 before the sale was closed. The bull's fourteen tested daughters averaged over 600 pounds of butter fat to the year record. The herd of which this bull was part brought almost $100,000 at the sale. This was because of men's belief in the biological perpetuity of characters.

B. Illustrations from human life

1. *The Kallikak family.* Tracing the heredity of a feeble-minded girl in the Vineland Training School, N. J.; great grandfather, Martin Kallikak, Jr., illegitimate son of young soldier and chance acquaint-

ance with a feeble-minded girl, who gave the resulting boy his father's full name. Feeble-minded Martin, Jr., had 480 descendants in the several generations now recorded; among them 143 are known to be feeble-minded; 43 doubtful feeble-minded; 36 descendants have illegitimate children; 33 others are sexual immorals; 24 habitual drunkards; 3 epileptics; 3 criminals; 82 died in infancy; 8 kept houses of prostitution.

Martin Kallikak, Sr., later married a respectable, intelligent woman. All of their 496 descendants of whom there is record were normal; no paupers; no criminals; no feeble-minded; no mental defectives; but 3 degenerates, which is too small a proportion out of 496 to indicate inherited defectiveness. (Cf. Goddard: *The Kallikak Family;* Macmillan.)

Conclusion: Martin Kallikak Sr.'s first mating testified to his exercising no control of the biological inheritance of his descendants nor did he protect his own biological inheritance. His second mating produced a line of descent carrying quality of very different characters. The social setting also gave these qualities opportunity for development.

2. *The Max Jukes family.* Story of this family up to 1874 written by Michael Dugale; from 1874 to 1915 by Estabrook; both volumes published by Putnam and Sons. In 1915 there were 2074 recorded descendants; 1258 of whom were living in that year. Among these 2074 are at least 600 feeble-minded or epileptics; 310 paupers; 300 prostitutes; 140 criminals; 7 murderers. None of the 2074 descendants is recorded as having completed a common school education, though 20 learned trades. Total cost of Jukes family to society reached not less than $2,500,000 in jails and court fees, expenses for sheriffs and lawyers for trying cases in penitentiaries, expenses for damages, not to speak of the intangible costs of social disgrace of the communities concerned.

3. *The Jonathan Edwards family.* There are 3394 known descendants up to 1900. Among them at least 60 physicians; 60 authors; 100 preachers; 100 lawyers; 295 college graduates, of whom 13 were college presidents. Not a single pauper in the list of descendants. (Cf. A. E. Winship (Boston) account of this family; now republished in 1925 volume.)

4. *The Wedgewood-Darwin family.* Among the descendants of this family are the Wedgewood family of pottery fame; Charles Darwin and Francis Galton. They were socially as well as intellectually prominent for a long period. Their social inheritance is believed to have been less potent in determining their group effectiveness than their biological inheritance.

Summary. There is significance in being well born. No wonder people try to trace their ancestry to the Mayflower, since it is biologically so respectable to be associated with some of those early settlers. Yet biological inheritance can undergo changes under influence of environment. This change is selective and not as extensive as some think. The entire Kallikak group, if placed in the Jonathan Edwards social environment, would persist in remaining feeble-minded.

BIOLOGICAL TRANSMISSION TO NEXT GENERATION—CONTROLLABLE TO SOME DEGREE

Man should think of his associates in a biological as well as in a social sense. Illustrative example; story of engaged couple. Young man inquired about ancestry of young woman. Girl's uncle gave the facts; girl resented inquiry and broke the engagement. "I don't want anybody snooping around trying to find out things about me. I am just as good as he is." To uncle's comment, "Why should you worry!" girl replied; "Well, I am afraid he will find out something about the family I do not know." Three months later she changed her mind and married the young man. When their children married, both parents advised them to follow this same plan of investigating heredity before becoming married.

TYPES OF SOCIAL INHERITANCE WHICH ARE MORE OR LESS CONTROLLABLE

1. *Language.* The native from Maine inherits one vernacular; the native from Alabama inherits another. Each feels sorry for the other because of his language limitations. I grew up in a provincial region, and am constantly reminded of the limitations in my language inheritance. How can we change?

2. *Politics.* We often inherit our political bias. At a recent school election 215 votes were cast; 108 were for Coolidge. The history

teacher checked up. He reported that almost without exception the children voted as the parents expect to vote, which he learns from his talks with the children. How change that? The real hope of democratic government is to break up this inherited bias by providing better reasons for voting.

3. *Mental attitudes.* Largely matters of social inheritance. Social group in which we live gives us our points of view of living and thinking. We are conventional according to our social group. We appropriate the attitude of mind set for the group by the dominant person in our social environment. The biggest change can be made on this point if we properly plan it. We can so direct social custom that defective biological inheritance, within very wide limits, may be held in check if undesirable, or developed if desirable, by our social inheritance.

ILLUSTRATIONS OF CHANGING SOCIAL STANDARDS

1. *Tobacco habit.* Tobacco chewing entirely respectable throughout the country a few years ago. Now tabooed in the East. Still practised by older generation in the West. Younger Western generation feels outraged by this habit. Western boys state: "Only negro boys are chewing tobacco; white boys do not . . . . but . . . . you should see us smoke cigarettes!" Maybe that will change.

2. *Spitting.* We can all remember when expectorating in the street, or in public vehicles, was regarded as unfortunate but not socially immoral. Today it is a social offense.

3. *Evasion and misrepresentation.* Evasion of the horse trader in making a sale—a psychological achievement. Today live stock is guaranteed to be as represented and advertised. At the recent Guernsey cattle sale referred to, one animal was returned because it developed that it was not as reported to be. It was accepted by previous owner without protest or comment. Standards of frankness are expected in certain social groups. To make a mistake in telling train time would be a misdemeanor by the information clerk at the Grand Central Station and might provoke report and subsequent discharge. Certain stores are quite as careful to tell the truth. The fault with social groups is not their hearts but their heads. The difficulty lies not so much in lack of desire to tell the truth, but in

inability to present facts clearly. It is no longer exceptional to hear that "honesty is the best policy." Most people now accept this as one of the working facts of life.

CONTROVERSY REGARDING BIOLOGICAL EVOLUTION

Mr. Bryan's attitude of eloquent ignorance about biology, and his crystallized prejudice are largely inherited from the limitations of his social environment. Prejudice must be removed by information carefully studied and understood. The difficulty is as much on part of people who are supposed to be specially informed as on part of people who disagree. Mutual antipathy in argument rests on mutual lack of effort to see the other man's point of view and to present our own from his side. Illustration: story of the knights fighting out a controversy whether the shield was gold or silver. They fought to exhaustion. Each falling toward his opponent saw the other side of the shield. One side was gold, the other silver. So both knights were right.

The biggest immediate contribution biological evolution has probably given us, is the emphasis placed on the fact that biological inheritance is less important to the generation now living than is (1) the way social groups are conditioned; and (2) the way social transmission takes place. To our generation a sense of obligation regarding social transmission to our offspring is of far more significance than a knowledge of biological inheritance.

DETERMINATION OF SOCIAL ENVIRONMENT

In science as in society the older idea was the concept of authority determining situations for us. Any manager or director who commands: "Do that because I say so," will have to step out in favor of somebody who can procure results on a different basis. Today modern society recognizes the authority based on scientific facts, the authority of truth, frankness, just relations, those constitute the real authority society must accept and develop. Biology applied to everyday affairs will point the way to a new interpretation of the human relations in business and society.

DISCUSSION

Question: I would like to question the conclusion drawn from the children's election. I do not see that the statistics indicate that, because probably at the age of these children there has been nothing to make them think definitely on that question, they would naturally vote the same way, so far as they knew, their parents would vote. Is that a fair test?

Dr. Caldwell: I do not know that it is. These children are doing more thinking about such questions and have been doing more thinking than the average voter. They have had from one to four years of discussion of social problems in history and government. They set up their polls and registration booths. They know the machinery better than most of us would have known it at that time. That they had maturity of thought about it is impossible.

Question: Would they not naturally feel, although they had some definite idea, that it would not outweigh their parents' views? I question whether they will vote that way when they get to voting age, whether they will vote the same way they did in this test.

Dr. Caldwell: They may not; they are being encouraged not to. That is not because we care whether they vote the way their parents vote, but because they should know why they are voting that way.

Question: What have you to say to the statement made at the last lecture that nature's ways are cooperative?

Dr. Caldwell: I am glad you raised that question. Nature's ways are awfully destructive, death is the rule and life the exception. There are more young come into the world, according to the figures gathered, than reach maturity in all kinds of living things except certain of our farm animals, which we have learned to care for in such a way that we get more of them to maturity. We are trying to save life. Nature does not do that. But if you want to get illustrations out of nature of effectiveness through coöperation, you can get that. Honey bees have such an organization as to make our human society seem very weak and ineffective. That may be the highest type of coöperation. Is that the question you had in mind?

Question: No; more the question of the survival of the fittest, which certain of us have been led to believe is not coöperative but competitive—success through competition.

Dr. Caldwell: In nature the success of one organism is matured at the expense of a very large number of other organisms of the same kind. May not the large financial success of one man be secured at the failure to succeed of a very large number of others?

Question: In building up a general working force in an office, from your experience what checks do you feel we can best make, by tracing back—just an individual's experience and education—is that enough of a check; can we rely on that as a help in employment?

Dr. Caldwell: We are securing in one group in New York City a very detailed description of all of the cases which have been made probably in any way in one large locality. We have 410 now. By cases, I do not mean people who fall in the hands of the courts entirely, but all kinds of misfits. It may be the most effective young people in the community who are disgruntled and known as the bolshevists of the community. We are trying to get their family setting. We would like to go back as many generations as we can to see what they come from. Our purpose is not immediately to define a procedure. We think we ought to collect as much information as possible. We have a committee which permits us to say to the authorities in that district we will keep records of these cases for many years, follow them and check them up in the hope of finding out eventually whether such a personnel study would be useful in other types of situations.

V

THE ECONOMIC FOUNDATIONS: WHAT ARE THE ECONOMIC FOUNDATIONS?

By Thomas Nixon Carver

There have been attempts in recent years to make economics into a psychological science. I am convinced that one must know something about psychology to be a first-class economist. Yet I am equally convinced that the fundamental principles of economics are not psychological. The fundamental principles of economics have to do with the question: What is it economical to do? rather than with the question, what impulses lead us to act? Of course, a great deal of importance attaches to human motives. It is important to appeal to the right motives in order to stimulate action, but that does not accomplish much unless you know first what you want men to do. If that problem is once settled then the next, how to get men to do it, is a psychological question. But what you want men to do, is not necessarily in most instances a psychological problem. A straight line is the shortest distance between two points, or at least it used to be before Einstein, and for certain practical purposes is still. That is not a psychological fact. If you want a man to travel in a straight line, then you can bring in your psychology.

The so-called liberty that man enjoys has been very aptly defined as liberty to choose his own particular form of slavery. There is a good deal in that. Choose to become a business man, and thereafter you are driven by circumstances. There are many things you have to decide for yourself; if you decide wrongly you soon stop being a business man. If you decide rightly you stay in the business, and thus you are in a sense driven by circumstances. If you elect to be a scholar you are a slave to the midnight lamp. Again, you are driven by circumstances. No matter what you elect to do, the circumstances surrounding that occupation will drive you either in one

direction or the other. If you are driven in one direction you succeed; if in the other, you are put out of business. In a great variety of cases the circumstances which determine whether you fail or succeed are physical and not psychological.

Let me illustrate the reaction upon our economic psychology of what are called outside or physical circumstances. Imagine a race living for many, say thousands of generations, under the conditions which faced the Children of Israel in the wilderness when they were fed by manna which came fresh every morning. If you could imagine people living perpetually in that situation, it is perfectly certain they would become a thriftless people. Thrifty people would not get on as well as the thriftless, who took the manna as it came, ate it up day by day and gave no thought to the morrow. Such a race would have taken on that psychological characteristic which we sometimes call thriftlessness, and in their moral system they would have called thrift a vice and thriftlessness a virtue. But a race that grew up in a climate of long winters or long dry spells, periods of abundance followed by periods of dearth, would have taken on another characteristic. People who did not save for the cold winter did not live through it. People who did, lived through it. So they would naturally, in the course of thousands of generations, develop the squirrel-like habit of hoarding things up. They would behave more or less automatically, as do the squirrels and bees. If they developed a moral system it would be one in which thrift was called a virtue and thriftlessness a vice.

A race may, however, have a perverted moral system, one that hinders rather than helps. People who live in a country with long winters and who persist in calling thrift a vice and thriftlessness a virtue have a moral system that handicaps and really tends to exterminate the whole race. But if such people have a moral system that helps them in the struggle, they have an advantage. A good and sound system is truly as much a means of survival as fuel and clothes. Even a sound religion may be classed as a factor in survival. Unsound religion, emotional interests and habits that unfit them for the life they have to live would be a handicap and not a help. In the course of time one would not find many tribes adhering to a religion or a moral system that unfitted them for the kind of life they had to live.

But this psychological or moral development would be a sort of protective reflection of the physical circumstance which forced itself upon them, the physical circumstance becoming a kind of mold within which their psychology would develop.

Suppose we lived in a world or in a country or geographical situation where isolated effort would accomplish more than associated or coördinated effort; where the man who works alone gets on better than the man who works in association with others. Do you imagine that we would ever become a socialized breed of animal? Or would Aristotle, even, have written "Man is a political animal"? Those who insisted upon working in groups would have failed in competition with those who preferred to work alone. I think you can support that conclusion by some biological evidence. Find any animal that gets a better living when it hunts alone than when it hunts in packs, and you will generally find it a very unsocial animal. I do not see, for example, what advantage the tiger would find if it hunted in packs. The tiger is big and strong enough to kill almost everything it wants. If it hunted in packs it would scare away or thin out its quarry. Here is a case where isolation works better than association.

With our particular type of animal life there seems to be a really great advantage in working together in groups. Those morose individuals who cannot work with their fellows without quarrelling or fighting or getting into trouble have been eliminated; in the course of thousands of generations they have failed. Those who work together comfortably in groups, whose nervous organisms are such that they can work agreeably with other people—such persons get on better in the long run than the others. This physical fact that more can be accomplished by working together practically compels us to work together in groups and is probably the reason that we are somewhat social in our habits.

Some modern writers question whether man is a social animal. There are two reasons for this query. One is a misinterpretation of the word "social." I am inclined to think that the word "social" admits of the comparative degree. One can be more social or less social. It is true that we are not perfectly social. We all have irritable moods when it is a little difficult to get on with other irritable people. We are not as social as some insects, who never do anything

wrong, who impulsively or instinctively do exactly and invariably what it is to the best interest of the tribe that they should do. They have attained unto complete sanctification not by evangelism, but by the process of variation and selection. There is a perfectly sanctified social type of ant, for example, that is never tempted to do wrong or to do anything that is not in perfect accord with what the tribe needs to have him do. We are a long way from that. However, we can change our habits a little more easily than those ants can. We can make a living in a new environment; we can adapt ourselves. But the strict and awful morality of the ant is something which we have not begun to approach.

In many other ways we are driven by physical circumstances. Of course, it is irritating at times to be driven even by physical circumstances when we do not want to be driven. However, we would rather be driven by impersonal circumstances than by human coercion. Thus freedom means, generally, freedom from coercion by another human being, of whom we have a rather poorer opinion than we have of ourselves.

Here, again, we are beginning to realize that in human control there is something to which we do not object if it becomes sufficiently impersonal. Lawyers have been working on this for a great many generations. They have been trying to develop a system under which we may be governed by law rather than personalities; where the magistrate merely becomes a sort of instrument through which the law operates. Under a government of law the magistrate does not make the law; he does not really have much discretion in interpreting it. He just finds out what law is and sets its machinery going. Under such a government, the law becomes in some respects like a natural law. It operates almost as impersonally as a law of nature; it becomes calculable; we can tell in advance what it will do to us, just as we can tell what the law of nature will do. I never heard anyone getting excited in discussing whether the law of gravitation is just or unjust, so long as it works accurately and calculably and is not at all personal in its operation. If it kept us guessing we would have a little difficulty in adjusting ourselves. When human law is not only administered but largely made by magistrates, when we simply have a government of magistrates rather than a government

of law, we come before the magistrate and take whatever he doles out. That sort of law is intolerable. But in so far as we can build up a system under which law conforms closely to a law of nature as to its calculability, then we endure it, for a time at least, even though it is unjust. We know in advance exactly what will happen and can adjust ourselves. To be driven by impersonal circumstances or by a system of human law that is calculable, is not very irksome nor disagreeable.

Most of the economic laws, that is the known economic laws, are of this general, impersonal sort. There are not a great many right ways of doing any job. There are a thousand wrong ways, no matter what the job is. You can, with great difficulty, develop a kodak film properly; you can also spoil it very easily. It takes no brains to spoil it; it is hard to develop it just right. In a very strict, scientific sense, "Strait is the gate and narrow is the way." The way that leads to continued existence is the strait and narrow one. The broad and gay one leads to failure. There are a thousand ways to fail, and generally only one way to succeed, and that one resolves itself very largely into the question of economizing man power. This is a simple statement to make, yet it is always difficult to know how to economize man power.

Let me state a few general propositions, almost truisms. A nation cannot possibly prosper that wastes a great deal of its man power. By wasting I mean using it up in a way that does not give very much in return to renew the man power used up. A nation, on the other hand, that economizes its man power, and has something to show for every ounce of man power exercised, will prosper. We get a sort of circle here. We can consume something, say good food, and it will produce energy in the system. If the energy thus developed does something that causes more food to grow with which to restore the energy used up, and so on, the people prosper.

Now, a prosperous country is merely one enlarging that stream of energy as it moves around the circle. With a given amount of energy properly economized we grow more food, of course, there are other things besides food, than is sufficient to restore what was used up in producing that food, so that by consuming the food that we get we develop energy again and produce still more food than was

necessary to replace it. That enlarges the stream. This may not have a very practical application to business; but it does at least show where business fits into the universe.

In asking the purpose of all this, we must admit that we do not know exactly. But we notice that every living creature seems to be doing its utmost to transform the maximum amount of solar energy into vital energy—in our case, into human energy. We act exactly as though we thought that to be the chief end of man. Why not assume that it is? This gives us as good a *summum bonum* as any.

Now with every lower form of life, things naturally and inevitably reach a stage when the enlargement of that system is no longer possible. They come to a point called the equilibrium of energy. Grass will grow as thick as the conditions will permit—which means that all the nourishment the plant can get is used up in the process of getting more and reproducing its kind so as to keep the cycle going. If thinned out, then there is a little more nourishment for each plant. The surplus can be used in reproduction until the equilibrium is reached again; then it can go no further. If for some artificial reason grass gets too thick, it has to thin itself out. If the plant can not get food enough to replace that which is used up, then some plants must die and give others a chance until the equilibrium is restored.

That is true of practically every one of the lower animals. Of course, they have their seasonal changes. There may be a period of years when the buffalo will increase very rapidly because there has been plenty of rain and grass. But in the long run the buffalo maintains an equilibrium of energy; it takes all his energy to get grass enough to replace the energy used up in getting it. Or we can say the same thing by beginning at another point in the circle. All the food any buffalo can get supplies it with only enough energy to get enough grass to replace the energy used up. It is always a circle. No matter how we begin, we follow the stream of energy around the circle and there is no enlargement of the stream, the reason being that the buffalo is not an economic animal.

Man is the economic animal, the contriver. He finds ways to economize energy to get more food than is needed to restore the energy

used up in getting it. That means he can support more people. We may ultimately reach a level or an equilibrium where, with all our ingenuity and economy, we cannot get more than enough sustenance to keep us going. But such a condition is not in sight yet.

Fundamentally there is no waste in this world except the waste of human energy. Of course, the product of human energy can be wasted, which amounts to the same thing. A product is wasted when it does not reproduce the energy used in its production. Merely to transfer a product from one person to another does not destroy anything; one loses, another gains. We say people lose money in a bad investment. Yet someone else gets it. The money is not actually lost unless it is actually destroyed. What is lost is the human power hired to do something that did not pay. We hire somebody to dig a hole in the ground looking for mineral which is not there. We lose money and the man to whom we pay wages gets it. The money is not lost, but the man power used in digging that hole is lost forever. That is the nature of all waste—a waste of man power or of human energy, which waste tends to narrow down the stream. If the man who was hired to dig should discover some useful mineral, then there is something to show for it, something to use in supplying the multitudinous needs of man and enlarge the stream of energy. All the really fundamental laws of economics relate to the enlargement or diminution of that stream.

What are some of the more important ways by which man power is economized and made to more than replace itself?

I have already suggested a division of labor, which means working together. It is a physical fact that two men with two hand spikes can roll more than twice as big a log as one man with one hand spike. Two men in a hay field can do more than twice as much work as one man in a hay field. Those are simple illustrations of a principle which runs through our economic life. I do not need to enlarge on the division of labor, because every economic treatise since Adam Smith has made much of that principle. But it takes on many diverse forms. We have people working together in the same hay field. We have people working in fields, thousands of miles apart, half-way around the world, while their effort is being coördinated somewhere else. One woman is raising silk worms in Japan;

someone in New Jersey is spinning that silk; others are weaving it; others made the machines somewhere else. All their efforts are coördinated, though separated by thousands of miles of space. The coördination of effort put forth at different points in space is one phase of the division of labor.

Another concept that we do not understand quite so readily is the coördination of labor performed at different times. It is easy to think of bridging space. Transportation will overcome it and carry goods from one part of the world to another. How can we bridge time? It can be done in a way, that is, you can actually coördinate the work of a man who lived hundreds of years ago with the work of the man who lives this evening. But there are certain very specific conditions. Some Greek singer sang two thousand years ago; yet no one today can work with him unless his musical score was preserved on some material substance. There always has to be a material substance of some kind to connect the worker of one period with the worker of another. A few hundred years ago a skilful workman in an Italian city made a violin, and somebody else is playing that violin this evening. The work of the two is coördinated; they are working together. There had to be something to connect the two workers; there had to be a material thing that would last. If someone had been present to write on a piece of papyrus or parchment, a few notes or some kind of a score showing what the Greek singer sang, there would be something to connect the singer of the past with the singer of today. One of the remarkable characteristics of the modern industrial age is the extent to which labor is coördinated that is performed at widely separated times. Or, stated another way: There are a number of things made by past labor that are now being used by present labor. When the work of the violin maker is coördinated with the work of the musician today we see this fact, just as we do when mentioning that the violin which he made is in existence today. It is a form of economic goods.

Now to say that a vast quantity of past labor is being coördinated with present labor is like saying that a vast quantity of things made by past labor are used by present labor. That is very simple and very economical. Of course, it is not necessary always that several hundred years should elapse, yet certainly we would not have much

coördination of effort, if the violinist who wants to play in a concert tonight has to make his violin this evening before he started.

Now that mass of things serving as the connecting link between past and present labor, or present and future labor, has a name. It is called Capital. That is what capital is in economic terms; nothing but that.

Yet other things are necessary besides material substances. There has to be some coördinating intelligence or the labor is not coördinated. It does not coördinate itself automatically, but has to be done by somebody. It can be done in various ways. Let us take the simple matter of a pair of shoes. Some years ago cowboys were herding cattle out in Wyoming. A year or two later some of those steers were shipped to Omaha, butchered and skinned. The skins were sent to a tannery and there became leather. Then the leather was sent to a shoe factory. A great many different people handled it at different times, all their efforts being coördinated. Suppose there had been no other persons to do it. Here were these cowboys with cattle on their hands. They could have taken them to Omaha to be butchered, still owning the hides. They would have to take the butchers as partners. Then the hide is owned by some cowboys and some butchers jointly. They have to take it to a tannery. They would have to take the tanners in with them. Then the cowboys, the butchers and the tanners take the leather to a shoe factory and have some shoes made. There are four crowds now owning the substance in the form of shoes. Then they manage to sell the shoes to some people who wear shoes, and divide up the money among themselves. It could be done that way. It is a physical possibility, but very uneconomical.

The same thing would be accomplished with much less effort if the cowboys, the butchers, the tanners and the shoemakers sell out to somebody else who buys the products of their labor from them. The buyer then owns the product, having paid for it. In this case you have one capitalist. In the other case they were all their own capitalists. It has to be done by somebody, either by the joint effort of everybody that had any hand in it, or by some special person. If people once understood that, I do not think the word "capitalist" would be in such bad odor with some people in society today.

That is what a capitalist is. He is the one who specializes on coördinating labor which is performed at different times. If he does his work well he is a means of getting the coördinating done with the least exercise or waste of man power.

Here we come upon a psychological problem—and I admit that some of these problems are very important factors in economics. In this integration of effort that takes place there is room for infinite misunderstanding. If the cowboys sell to the butchers they would like of course, to get as high a price as they can. The butchers want to give the cowboys as low a price as they can. There is conflict of interest. Then the butchers sell skins to the tanners and want to get as high a price as possible while the tanners want a low price: another conflict which may breed trouble.

I should like to use another illustration which amounts to the same thing, but is not quite so complicated. I mentioned last year that during the sugar shortage in the war the cranberry dealers on Cape Cod had a great deal of difficulty selling cranberries. There was no lack of demand for cranberry sauce—people liked it as much as ever. It was just an average cranberry crop. Some people jumped to the conclusion that the law of supply and demand was not in operation. It was in operation. The demand for cranberry sauce was just as great. Yet cranberry sauce is not made from cranberries alone. It is made from cranberries and sugar, and if you cannot get one ingredient, what is the other worth to you? You might have a million people with a million dollars clamoring for cranberry sauce, willing to pay money for it, and yet not be able to sell a single bushel of cranberries. Here was another conflict of interest. The few men who had sugar to sell got a very high price for it while the many men who had cranberries to sell got a low price. What would be a perfectly natural thing for the cranberry growers to do? To start a war against the sugar men would be perfectly natural, for it is the way we behave toward our enemies. If cranberry growers regard sugar producers as enemies, they will act accordingly and bring into action a little bit of ancestral psychology.

Whether war is a natural state of man or not may depend on our interpretation of the word "natural." A great many men have had to fight non-human as well as human enemies. In prehistoric times

the enemies were very large; they were not microbes, but big animals and our ancestors had to fight them with the same weapons as were used against human enemies. They had to use the fighting muscles and the fighting muscles had to be driven by a fighting temper, and in that long process of survival, the fighting temper had survival value. The poetical allusion to the celluloid dog fighting an asbestos cat in Hades would be mild in comparison with the plight of a man without a fighting temper in such a world. The fighting temper had survival value; as a result those who had it survived. We are the progeny of those people. The progeny of the people lacking a fighting temper are not here tonight. This fighting temper, while it had survival value when dealing with that kind of an enemy, sometimes gives trouble when meeting the kind of enemy who does not need to be thinned out. In this economic world today—now that we have become economic animals—we are facing enemies of diametrically opposite sort, who need to be thickened and increased instead of thinned out. Our ancestral psychology does not fit us at all to meet this situation with which our fighting temper plays the mischief.

The cranberry growers of our illustration probably have the fighting temper like all the rest of us. If they have, it would lead them to war against their enemies. Suppose they had started a war of extermination against all sugar growers. Would that have helped them? No, it would have made things worse. It is an expression of the same spirit that makes a man kick the chair against which he has barked his shin, or whip an animal servant when kindness would be wiser. But today we are face to face with "enemies" who must be increased. What those cranberry growers needed was more sugar or more manufacturers to sell it, and to war against them would not tend to increase their number.

Or take a group of farmers out in a new western farm community. They have plenty of good land, but not enough equipment for it. If they could borrow money and buy the equipment they could produce more and make the money pay for itself; but there are few money lenders there. The farmers have to bid against one another for the little loanable capital and this makes a high rate of interest. Of course, what they need is to increase the number of money lenders

and attract more loanable capital. But the fighting temper leads them to wage some sort of war against the money lenders and drive them out of the community. That is the perfectly natural yet not the economic thing to do. The fighting temper unfits for many of the problems of economic life.

There is an oversupply of laborers in a country like Russia, where there is not capital enough to equip them for working in the factories or on the farms. Russians are trying frantically to borrow capital, believing if they had more capital they could better equip farms and factories and produce more for supplying the needs of the people. Well, so far, that is sound reasoning; but the way to get capital is not to war on capitalists. The remedy is to increase the number of capitalists. If they do not realize that they are now dealing with a new kind of enemy, their ancestral psychology will not fit them to meet it. Unless they get away from this primitive behaviorism and learn to think in terms of calculated self-interest they will never solve their problem. What natural psychology moves us to do has no concern with economics. The real question is: What is it economical to do? Find the answer to that and then set psychology working in that direction.

It is economical for the western farmer to draw eastern capital to his community. There is now a constructive measure by means of which farm loans are made attractive. If you have a little money to lend and somebody asks you to lend it on a farm mortgage out West somewhere, in some state where you never have been, that is not attractive to you. You do not know what the land is like, you do not know the person, nor the laws of the state relating to farm mortgages. It would take a very high rate of interest to induce you to send money to that neighborhood. But, through the farm loan system a bunch of those mortgages put together have been inspected once and have all been certified. Against them bonds are issued and offered for sale. You can buy one of those bonds safely for the Government has done the inspecting. That is the way to draw capital to that community. Merely to indulge in tirades against money lenders is following a somewhat antiquated instinctive behaviorism.

The economic foundations are generally of this impersonal, cir-

cumstantial sort, dealing with the relation of cause and effect rather than with human instincts and passions. Though these enter in a secondary sense, the fundamental things are economic laws, impersonal in their operation, requiring analytical study, laws which can only be handled by people who think in terms of their own calculated self-interest.

DISCUSSION

Question: Is the labor bank movement contrary to the natural fighting behavior?

Dr. Carver: I think so. Labor is beginning to think in terms of what is called the higher strategy of labor. There have been some very disturbing things said about labor banks by their own promoters. They talk in a slightly demogogical vein about what they are going to do, but their practice seems to be sound, so far as an outsider can judge. There is not more than one right way to run a bank, but there are a thousand wrong ones. Some more or less demagogical propaganda led one to fear labor banks were going to finance enterprises that the capitalistic banks would not permit to run. I think banks are very impersonal and will finance anything that has a chance to succeed.

Question: Are laborers looking toward economic success when they start to produce, in the clothing manufacturing? We shall come against the problem of management very shortly.

Dr. Carver: Neither labor nor capital nor anything else produces much unless it is superbly managed. Inferior management does not pay expenses. A belief is abroad that in some way capital more or less automatically of itself brings in something. Capital brings in something in the same sense that a horse race does. If you bet on the right horse, it does. Mere possession of capital does not bring anything unless you bet on the right man, or put it under the right management, and it takes a very superb management to get something out of it.

Question: They say the garment workers in Cleveland are going to run a plant. Is that parallel to the cowboy?

Dr. Carver: It is not quite as bad as that, for it does not involve their leaving their jobs in Wyoming. If they succeed in finding a superior manager there is no reason why that should not work just as well as when they work for somebody else. However, a manager seldom works as well on a salary as when his income is wholly contingent. When the bankruptcy court is after him every minute, he will sometimes work harder than he will for a salary. The word "profit" is greatly abused. Profit is merely contingent income. You get it if things work out well; if they do not, you do not get it. If you think you can save profits by putting people on

salary you are mistaken. You can eat at a restaurant that pays no profit and not get food any cheaper. It is merely not so well managed. You can buy clothes in a store that is failing, you do no better than if you bought at a store that is paying a profit. Profits do not add to the price or subtract from wages made by superior managers. If the garment workers can get that excellent management it will be a fine thing. If they cannot, they will lose money.

Question: Are successful laborers in a sense increasing the number of capitalists?

Dr. Carver: Yes. I think we may expect many good reactions from that fact. It will be good education for they learn more about business and its management. Besides, it will bring about a better understanding between laborers and employers, when laborers have a little taste of the problems of the employer.

Question: What is the best substitute for this fighting instinct that blocks the way?

Dr. Carver: I do not know anything better than a little study of elementary economics.

Take the illustration of Russia, if they want more capital it is not a good plan to war on capitalists. A capitalist cannot be expected to send capital into a country that has started a war against capitalists. There is an old Japanese proverb that says: "Do not lend money to a monkey unless you can climb a tree."

Question: Do you think it economically sound for an employer to sell to his employees entirely apart from wages at lower prices than that same product would bring in a competitive market?

Dr. Carver: It would have the same effect. The privilege of carrying home stuff at a low price would be an attractive part of the job. Some institutions not only pay a salary but furnish a house. I do not see how this differs in principle from the case you mention. Part of the attractiveness of the job is that you get a house as well as money. I do not know whether this would actually appeal to the laboring people or not, whether it would make them feel satisfied if they understood they were getting something more than money from their job.

Question: Suppose the company establishes a fund from which pensions will be paid in the future. Would your answer be that this is an addition to wages?

Dr. Carver: It adds to the attractiveness of the job; it is part of the inducement to work for that firm.

Question: Still, if it was common practice among employers it would not add anything to the relative attractiveness of the job.

Dr. Carver: No, it would merely mean somewhat lower nominal wages in all industries. Part of the inducement would be in some other form. Almost every job has various elements of attractiveness. Sometimes it is pleasant work or a long vacation; sometimes there are other things you like about it—in addition to which you get a salary. I myself should be inclined to put them all under the same general terms and call them parts of wages or salary, wages partly in the form of a pay envelope and partly in certain privileges. To give a homely illustration, in domestic service in the South it is called "toting home vittles."

Question: There is quite a controversy between people in this field as to whether the pension is a deferred wage or not. In effect it might be added to the labor bill in the long run, and therefore be part of the wages. But is it part of the individual wage?

Dr. Carver: It is part of the labor cost. As to whether it is an inducement to a laborer is another question. Undoubtedly it will influence the older men, but the younger men do not think of it at all.

Question: Is there a tendency, especially in the pension and things that corporations do for their employees, toward a sort of national group insurance?

Dr. Carver: I am inclined to think we are developing in the other direction. Labor tends more and more to become a commodity. You find where there is a chronic oversupply of labor, you cannot treat it as a commodity because laborers would starve. They must attach themselves to some patron, become dependents and protégés of somebody. Take a country like Mexico. There are not enough jobs for one-tenth of the men so they attach themselves in personal relationship to somebody and that is the only way they can live. When it gets away from that situation of dependence and arrives at a stage where it is to its advantage to sell to the highest bidder, then the laborer treats his own labor as a commodity. That is probably one of the reasons why you invent all sorts of attractions to get your labor force. That is, if a certain wage is not adequate to get the kind of help you want, in order to do that you must add some attractions. If it is known in the community that a certain store is a good store to work for, that it will sell household supplies to you at cost or somewhere thereabouts, there is undoubtedly, in the long run, an added inducement to stay with that concern. When it becomes hard for people to get labor, they have to invent more and more attractions to hold their force. This condition is coming to be quite general in this country since the restriction of immigration. The greatest economic fact in the world today is the wide diffusion of wealth.

Question: Did I understand you to say that profits are not deducted from wages?

Dr. Carver: They are as a rule not added to price nor deducted from wages. Costs are kept down by a saving of labor, and saving labor from doing a lot of things it would have to do under inferior management. Ford makes considerable profit, yet you cannot say that this profit is added to the price of the car or deducted from wages. It is just superior management. Even if they made a billion dollars instead of a million, and did it in the same way, it would not be monopoly but superior management.

Question: Is there a reasonable price?

Dr. Carver: Probably no two people agree. My idea of a reasonable price is sometimes called an equilibrium price, one that will induce producers to produce as much as consumers will consume. There is balance. The price which produces that equilibrium is a reasonable price. It is a self-righting plan. The essence of the present system is voluntary agreement between free citizens. In so far as that system prevails evils tend to right themselves. When you destroy this system in any particular by substituting coercion or terrorism for voluntary agreement between free citizens, then it does not correct itself. Sometimes the present system is called the capitalistic system, and some people think of it as having been imposed on them by authority. Yet, if you analyze private property, you find that the absence of force is the fundamental factor. Where, among any group of people anywhere, coercion stops, there private property automatically exists. You get an object because you take a fancy to it. You cannot be dispossessed of it without your consent; that is property. So long as you had to hold possession by your own might, it was not property. All you need do in order to establish property is to stop violence. Do not understand me as saying too much. Many things in the definition of property are not determined by the mere stopping of force. So long as you have to hold by might you have no property; but when no coercion is permitted, then it is yours. If any one else wants it he has to buy it of you or get it as a gift. The essential basis of property comes into existence the moment force is suppressed.

Question: Is that force stopped by some other force?

Dr. Carver: It takes force to suppress it. But there again comes in the superior economy of having the force exercised by a known power that operates according to definite laws. That is my answer to the anarchist who objects to the exercise of force by government. It is economical to have it so exercised for it saves a lot of human energy that would otherwise be wasted.

Question: Where the balance of power exists, free citizens do not exist. In other words, if voluntary agreement of free citizens is the rule, then balance of power is the exception; yet some labor leaders will make us believe that balance of power is never or rarely on their side, and there is thus no voluntary agreement

between free citizens. What is the general trend of labor unions with regard to the economic use of human energy?

Dr. Carver: I think they are about to emerge into a new policy, getting away from the uneconomic fighting state into another stage, in which they begin to manoeuver for permanent advantage. If the number of capitalists in this country, of inventors, of business managers, and the number and amount of savings to be invested can be increased you will greatly increase the demand for labor, and make jobs multiply. Instead of fighting capital, unions will have to turn around, become capitalists and encourage the accumulation of capital. That will make capital fairly slosh about; there will be so much of it. If our business schools and colleges train men to handle it, many business enterprises will be going and business will expand. Then by a sound educational system misfits will be thinned out and there will be very few trained workers to supply the jobs. They will get high wages.

Question: It will not be consistent, however, with the continued reduction in working hours.

Dr. Carver: No, that is entirely uneconomical and without any economic justification whatsoever.

VI

THE ECONOMIC FOUNDATIONS: THE CONDITION OF LARGE-SCALE PRODUCTION

By Thomas Nixon Carver

One of the great problems of adjustment to this mechanical age is the coördination of the efforts of large numbers of people under one general plan. These people are sometimes widely separated in space, producing different parts of an ultimate product in different parts of the world. Different elements have to be assembled somewhere later on. That is fairly simple and easily understood. It is largely a matter of transportation. But another phase of this coördination is much more subtle and quite as important. Because it is more subtle and difficult it gives rise to a great deal of misunderstanding. I refer to the coördination of efforts put forth at different times. In order to coördinate the efforts even of two men who work at different times, there must be some durable substance to connect the two. If there is no durable object which serves as a factor to bind the two men together, you cannot coördinate their efforts. You may do it by memory, but then you are the physical substance. Yet individual memory cannot do all the uniting. There must be something or other, some physical substance—it may be nothing but a book or manuscript, or a musical instrument made years ago and played this evening. Without something tangible of that kind to connect the two men—you cannot coördinate their efforts. The sum total of these things that serve as binders to unite the efforts of men who work at different times is really what we call capital.

This coördinating is not done accidentally; somebody plans it and sees that it is carried out. It may not be one single person. The individual who made the violin made it; but unless somebody takes pains to preserve it, the violin will be thrown away and lost. If somebody owns it he is likely to take care of it and realize its value.

Otherwise it might be scrapped. A great society may own an instrument jointly; but it must be owned and cared for or it is not likely actually to serve as an effective means of combining the effort of the one who made it with the one who is to play it later on. If the tool is a machine the same principle may apply. The human part of that coördination is what the capitalist does. The thing itself, or the group of things called capital, have to be preserved and brought together. Those who see to it that these objects are preserved and made effective are capitalists. It may be a public capitalist, the State itself; a group of capitalists organized as a joint stock corporation; or an individual capitalist; but the people who attend to these things are capitalists, the things themselves are capital.

This coördination of the efforts of multitudes of men is called in another sense large-scale production. This is one of the almost necessary results of the era of invention. The use of power, other than the strength of human muscles, almost necessitates large-scale business. Where the motive power is altogether muscular force, generated in the human body and exercised by human muscles, there is no great advantage in immense units of production; here widely diffused production is about as effective as concentrated production. When we have powerful engines (or, it may be water power) they necessitate the massing of a good deal of machinery around the powerhouse, or the source of power. I believe some of the steam engineers have told me that they do not know the limit yet to which steam power can be generated more and more economically as the engine is enlarged. If it is possible to generate power more economically on a large than on a small scale, then it is economical to assemble around that power plant a large mass of machinery, unless there is some compensating loss of economy. In the main we seem to find it economical to mass machinery in close proximity to power plants. That in itself means coördination of the labor of vast numbers of men. Some of this labor is performed at different times as well as at different places.

I think one of the great social problems of the time arises here: the problem of putting the people whose efforts are thus coördinated on a large scale on some basis which is acceptable to them all. So far as the people who have worked at widely separated points in

time are concerned, this problem may be worked out fairly satisfactorily by the simple method of marketing. Suppose the miners who dig the ore sell it, we will say, to the smelters; and the smelters sell the iron to somebody else. Each one gets a share in the form of a price; then, when he is paid off, that settles it so far as he is concerned, assuming the price is satisfactory. (Of course, prices are not satisfactory to anybody in a complete sense. Miners want a higher price than they can possibly get. Smelters want to pay a lower price than they can possibly expect. But so long as the dissatisfaction is about equal on both sides we have achieved as near economic justice as we can ever obtain.) Or it can be done in a great many different ways. Somebody can hire the miners and pay them before waiting to sell the ore. Of course, that is the end of their interest. If they are satisfied with what they get for their labor, things settle themselves all right.

There is always danger of making this large-scale production or this coördination of the efforts of vast numbers of men mean more than it really does. When we say that things are now produced by such a large number of people, some will jump to the conclusion that wealth is socially produced. If we mean that a large number of people are hired for this purpose, then wealth is socially produced in a Pickwickian sense. But if we mean literally that wealth is socially produced, it is not true. Nothing is socially produced. Society cannot produce anything; it has no organs of production. Large numbers of people coöperate in the production of wealth. Society did not produce it, otherwise you and I would have had some part in it. But vast numbers of people did have some part in the production of practically everything in use. All those who shared in the production of a given article, no matter what it is, have some claim upon it. If they get nothing out of that production, they have a grievance. In a general way this is taken care of, though not always to the satisfaction of everybody. But if the cowboy on the western range, who herded the cow on which a hide grew, is paid for what he does, he at least has something out of the value of the shoes that are ultimately produced from the hide—perhaps not so much as he ought to have. The beauty of it is he was paid long before the shoes were ever made. And the men who work in

the tannery—who get the tanbark, if they still use tanbark—every one of them had a claim on some of the value which emerges eventually in the form of shoes. But if every one gets paid for what he does then he has something out of the price which the wearer eventually pays for the shoes.

How to distribute that price and pay some of the shares years in advance of the sale of the shoes is a very difficult question, giving rise to many misunderstandings and dissatisfactions. Most of the real grievances in the life of modern times grow out of this problem. The coördination of the labor of so many different men in the production of every single article makes dividing the price of the final product a perplexing problem. There is room for countless claims of injustice and infinite misunderstandings.

The problem is particularly difficult when it comes to a single establishment—the tannery itself, or the shoe factory. All past laborers have already been paid off. The machinery was bought and paid for; also those who made the machinery and those who have had anything to do with the leather are taken care of after a fashion; the labor is bought and paid for. The raw materials are assembled; the machines are assembled; the laborers are assembled who work in the shoe factory—and that has to be a large plant in these days. The most acute problems come up within an establishment of this kind.

The term "industrial democracy" has arisen in connection with this type of problem. Industrial democracy is not a question between the tanners, the butchers and the cowboys, or between the tanners and the shoemakers; but the shoe factory itself represents this great concentration of large numbers of people working under one management, one direction. In this huge organism men are working under the direction of men whom they did not elect. The claim is that this is undemocratic, that while we have achieved political, we have not yet achieved industrial democracy.

Now, the term "industrial democracy," like that other expression "all wealth is socially produced," is misunderstood and misapplied. This so-called undemocratic nature of modern business administration may have some undemocratic ingredients; but it shows a great deal more democracy than is generally understood. If we declare

modern business undemocratic because the workers do not elect their employers or the directors, we are going too far. We need to analyze the concept of democracy further to see what it means, and find out to what extent a modern industrial plant fails to come up to standard. If we see nothing more in democracy than what Carlyle called "dropping pieces of paper in a box," of course business is not democratic. Does it not mean more? It does. There is something beyond that in the spirit of the concept of democracy, or it is not worth much.

I should like to use a biological-physiological illustration—I am not using it as an argument, but only as an explanation to make a point clear. In the physiological organism we have a considerable concentration of control which we call the brain. In a broad sense, there are certain centers in the brain which, for our contention, rule the body. Is that fundamentally undemocratic? It seems to be necessary in order to have an efficient organism, that there should be one organism rather than a multiplicity of independent parts. Efficiency seems to require that every part should work together smoothly with every other part. If, in order to have democratic organization of that body, the governing center were eliminated, the body would not last long. A hen with her head cut off has achieved democracy in that sense—and that kind of democracy would be just about as effective as she is. Here is a physiological organism with concentrated control; that is not all there is to it, but one of the obvious, visible things is that all parts can be correlated.

Let me take another illustration. I have often heard the question discussed from the standpoint of specialization, from a really evolutionary point of view: "Is a monarchy not more highly evolved than a democracy; more specialization of function," etc.? Well, again, we may have different concepts of democracy. If we mean by democracy an unorganized primitive herd driven by impulse, then a monarchy is more highly organized. A monarchy represents coördinated, specialized order, different parts of the body politic working together in harmony. This we do not find in the disorganized herd. But assume that we have a large-scale and highly organized democracy with its representatives and specialists in control of this or that function. This sort of a democracy may be

fully as highly organized and as highly specialized as a monarchy. Yet what we call a democracy, I think, differs fundamentally from any sort of an autocracy in a particular that can be made clear by a biological analogy.

Suppose the brain had only one set of nerves to carry messages from the brain outward, and no set of nerves to carry sensations in the inward direction to the brain. I think we would then have something comparable to an autocracy. The autocrat has the machinery by which his orders are carried out in the most distant parts of his realm, but he has no machinery by which the subjects make their interests felt by him; that mechanism is lacking. If he is a benevolent despot he may take pains to find out. The Arabian Nights tell how Haroun-al-Raschid, that good despot of Bagdad, used to go around at night incognito in the city, trying to find out what his subjects thought and felt. The very fact that he had to do that indicated that the machinery was not there to do it automatically. It seems to me this illustrates the essential difference between an autocracy and a democracy. The mechanism for carrying out orders from the government or ruler is present in both forms of government. The courts and the policemen are the nerves of control in the physiological organism of a monarchy as well as of a democracy. Yet only in a democracy do we have an organism in which every subject is permitted to make his interests known to and felt by those in power. Democracy has supplied the afferent nerves to the national organism. It seems to me this brings out the essentials of democracy. It is what might be called sensitiveness; those who exercise power are made sensitive by this organic mechanism to the interests of every part of the body politic. That is the essential nature of democracy.

Bear in mind, the difference is not that we are not governed under a democracy as under a monarchy. We are governed. In a certain sense we govern; but this implies we merely have means by which we can make our governors give attention to us. That is all we can do. When we meet a policeman on the corner who says, stop, we would better stop; he is the boss. If we think we are boss we will get into trouble because our logic is wrong. What we really do is not govern ourselves, we are governed; but we have the machinery

by which our governors can find out how we think or feel. We do not have to organize a revolt in order to make our interests known. Autocracy has no machinery ready; the only way subjects can object is by revolution. Where this machinery is ready, there is no need of starting a revolution or insurrection to express dissent with government action. This is the only and the great difference between autocracy and democracy. We are governed just the same, but we have the inestimable privilege of letting the governors know how we feel about what they are doing. They are made sensitive by the very body politic, they do not have to go around surreptitiously trying to find out what the people are thinking.

That element of sensitiveness, I believe, is the essence of democracy everywhere. Supply that and you have democracy, no matter what the machinery happens to be by which you supply it. In politics, in government, we have not yet invented anything better than the ballot. There are other partial substitutes. The right of petition is a means by which we may make our wishes known, so that any time we may circulate a petition and hand it to our governors. In the main we rely in modern democracy on the ballot, that simple device of dropping a piece of paper in a box, registering assent or dissent to what is being done. The factor of sensitiveness is important, not the method by which sensitiveness is achieved.

Suppose the employees in the Treasury Department at Washington decided that Department should be run according to their ideas of democracy; so they themselves would assume the prerogatives of electing the secretary of the treasury, the assistant secretaries, the administrative officers, and of determining the policy of the Treasury Department. Would that be more democratic or less democratic than the present arrangement? If the chief purpose of the Treasury Department is to provide jobs to those employed there, I should say that it would be democratic for the employees to assume control. The Department would then be very sensitive to the needs and interests of those whom it was designed to serve. If, however, the Treasury Department exists not for the benefit of its employees, nor to give jobs, but for the benefit of the citizenry in general—and only incidentally, in a minor sense, to give jobs—then it must be sensitive to the interests of those whom it was designed to serve,

namely, the citizens in general. If we can make it sensitive to their wishes we have achieved democracy. If, by having employees vote on these questions would increase its sensitiveness, then that would be still more democratic. If, under employee control, the employees got the perverted notion that the Department had to be run for their benefit primarily and not for that of the citizenry in general, I should say it was undemocratic, or tending away from democracy.

Apply the same test to any government enterprise. Suppose the New York City employees decide that they will elect a mayor, all the supervisors and all the different department heads. Would that be more democratic than to have them elected by the citizenry in general? They might think so; they would think so if they imagined the City Hall and its departments are run primarily for their benefit and only incidentally for that of the people at large. Like the Treasury Department or any other enterprise municipal government must, in order to be democratic, be sensitive to the interests it was designed to serve. If it was designed primarily to serve the interests of its employees, then it must be sensitive to their interests. If it was designed to serve the interests of the New York citizens in general, then it must be sensitive to their interests. As citizens, of course, the employees have the same interest and should have the same vote as others, though some have gone too far. I believe it was John Burns who said sometime ago in England, if he had his way he would disfranchise every government employee, apparently for the only reason that they seem to think government is run for their benefit and not for that of the people in general. They insisted upon voting as employees rather than as citizens.

Apply this principle to an industry. Is it more democratic for employees in an industry (say a shoe factory) to elect the managers, superintendents and foremen and determine the politics of that shoe factory, or is it less democratic? Apply the same test. For what purpose does a shoe factory exist? To give jobs to its employees or to furnish shoes for people who want shoes? What is its real function? My idea is that its primary function is to provide shoes for people; and its secondary function is to give people jobs. If its chief object were to give jobs and its secondary purpose to supply shoes, I should say it would be democratic if the employees would

take over the management, elect their own managers, superintendents and foremen and determine the policies. But if the condition is reversed, we cannot reach that conclusion unless we reject this whole way of looking at things. If the primary function of an industry is to supply the needs of people who want the product, then it must be sensitive to their interests. By achieving this, up to that point, we have achieved industrial democracy. That means the shoe factory must be sensitive to the interests of the people who want shoes. Do we need the ballot for that, or have we not something better? In a sense we vote our dollars; don't we? Instead of going to an election booth once a year dropping a piece of paper in a box, we go as often as we feel like it and drop eight or ten dollars in somebody's hands for shoes, if we like them. If we do not, we withhold our dollars. It seems to me that this gives us a better hold on the shoe manufacturer than we have on our public officials. I do not always know what I am getting for a dollar when I spend it; but on the whole I think I come more nearly to knowing what I get for my dollar than I do for my ballot. I am woefully ignorant on both problems; but I think my ignorance is a little deeper on the question as to how to use my ballot than how to use my dollar.

I used to feel quite proud of myself every time I went to the voting booth to perform my civic duty—I still do— but I feel more and more like a humbug every year. I go into the booth and look owlishly at a lot of names. I take a pencil and make a lot of marks opposite the names. In one case out of ten perhaps I have heard of the name before. In the other nine cases, if somebody should pat me on the shoulder when I come out of the booth I would not know whether I voted for him or not. Now, so far as those nine cases out of ten are concerned, a blind man can vote as intelligently as I can; a man who cannot read can vote as intelligently as I can. I am inclined to believe, as Professor Royce once said, we need a good boss. The man who knows his ignorance is sometimes more honest than we so-called intellectuals. He knows he does not know, so he says: "I will ask so-and-so, who knows." That so-and-so may be boss; he specializes and can tell the voter how to vote. If the rest of us are as honest as that man who knows he is ignorant, we might pick out a better boss than he does, if we are willing to take a great deal of time to inform ourselves before election comes around.

So far as our present practices are concerned, most of us know nothing about what we are voting for. Yet we call it democratic and, in a sense, it is. I think there is real sensitiveness here. The reason we do not know generally is because things are working so smoothly we do not care. We have no interest that calls for a positive, definite and intelligent vote. One man can keep the records in the City Hall approximately as well as another. So long as they are reasonably well kept it does not make much difference to us who happens to get elected to that office. If things go wrong we suddenly arouse ourselves and make our interest felt. But so long as things run with a fair degree of smoothness, this method which I have described does give us democracy. That is, the government really is sensitive in a rough sort of way—not as sensitive as it might be—there are a good many fine distinctions; but so far as larger issues are concerned, it really is about as sensitive as that kind of machinery can make it. It is a clumsy method of creating sensitiveness, but it is the best we have.

I am inclined to think that so far as the primary purpose of an industry is concerned—there is a secondary very important purpose—but so far as the primary purpose is concerned, the mere process of buying and selling gives more sensitiveness than voting would. The people for whose interests the industry runs, the buyers of the product, have means of making that industry sensitive to their interests, except where there is a monopoly. In that case the buyer has no other alternative; he has not as good an opportunity as he he ought to have. But in so far as he is presented with other opportunities for spending money, he can take his choice. Then the industry is extremely sensitive to the interests of those for whose benefit it exists primarily.

I will admit there is also the secondary purpose of giving employment to the people who work in the industry. There should be sensitiveness here. Ultimately I think we are going to create that kind of sensitiveness without any new machinery. At times there is very little sensitiveness, for instance in the case of a chronic oversupply of labor. When two laborers are looking for every job, and each one knows if he quits one job he is going to have a hard time getting another, then he will submit to things he would not otherwise en-

dure. The management then can be high-handed and arbitrary; it is not very sensitive to his desires. But suppose we could create another set of conditions. Suppose we could arrive at a situation where there are so many jobs and so few laborers that any laborer in any position knows perfectly well that if he quits there is a job pretty nearly as good waiting for him—several others in fact; and that employers are continually looking for men. If we can ever reach this stage, I insist that management then will have to be rather more sensitive to the interests of its working people, almost as sensitive as it now is to the interests of its customers. That will give adequate sensitiveness and genuine industrial democracy. Until that is attained there will be no great amount of managerial sensitiveness. In a country where the labor market is not only chronically but vastly oversupplied, there is really none.

I might approach this from another angle. It has been rather piously pronounced in this country that labor is not a commodity. Well, in most parts of the world it is not. Where you have the bad conditions described as chronic oversupply of labor, if you treat labor as a commodity most workers will starve. So, as a sort of natural adjustment to that situation, labor is not a commodity. The laborer attaches himself to a patron, vows a kind of loyalty, and establishes a kind of paternal relationship; labor is not a commodity there. But just notice what happens when conditions so improve that there is no oversupply of labor; when laborers instead of starving if thrown out of a job, are quite likely to find better jobs than the ones they already hold. What would the laborer do then? Would he not sell his labor to a higher bidder? The laborers themselves, when they arrive at these conditions, insist upon treating their own labor as a commodity and selling it to the highest bidder. Now something is lost when the old paternal relationship disappears from the world. There are some fine things about it; but we can console ourselves for their loss by the knowledge that we are getting something much better in return. I think we ought to welcome the day when conditions will be such that every laborer will prefer to regard his labor as a commodity because he can always sell it at a good price, and would rather have the privilege of selling his labor to the highest bidder than become a dependent either upon an individual or upon a state.

In a country like England, where multitudes of workers receive an unemployment dole, they are just as dependent as if they were in a state of peonage. If I had my choice I would rather be a dependent under a kindly patron than under an impersonal government. So long as those conditions exist you can say labor is not a commodity there. But when conditions are good the laborer himself will prefer to treat his labor as a commodity and sell it to the highest bidder. When we reach that stage, as I frankly hope we will—we are arriving there pretty rapidly in this country—labor will be so scarce and hard to find that every laborer will resent the idea of his labor not being a commodity to be sold to the highest bidder; he will work for whom he pleases and offer his labor for sale on the best market he can find.

Maybe we should not call labor a commodity under those conditions. A commodity is something sold on the market, as anything else is sold, to the highest bidder, where the laws of supply and demand control. Under those circumstances I should say labor is a commodity. When it becomes a commodity in that sense, then the head of that shoe factory will be just as sensitive to the interests of his laborers as he now is to the interests of those who buy the commodity, called a shoe, sold on the market. That is my idea of the ultimate form of industrial democracy. When laborers feel that they are more or less dependent, that they dare not cut themselves loose from a job for fear they cannot get another, then the management can be arbitrary. We must find ways to patch things up as long as that condition exists. This is a serious problem at the present time, but I do not think it is a perpetual problem. We are working it out fairly rapidly in this country in such a way that laborers will be just as independent in offering their labor for sale as the buyer of the product now is in offering his money for the product.

DISCUSSION

Question: In the political democracy we select our chief executive; in the industrial democracy we, as purchasers of a pair of shoes, do not select the management which produces them. How can that parallel be developed further?

Dr. Carver: The government, of course, does not deliberately enter into competition. You cannot say if you do not like this government you will pay your

taxes to a rival government. So you have not the choice you have in buying shoes, in buying from one manufacturer or another; you must buy of one government whether you like it or not. The only way you can make that government sensitive to your interests is by voting. You have a rather better hold on the manufacturer of shoes than you have on the government. In that respect the industry is more sensitive to the interest of its patrons than is the government. The parallel is here: the shoe manufacturer has to be very sensitive to the desires of people who want shoes; he is on the *qui vive* all the time; he has to be or he goes out of business. That, I hold, is the essence of democracy. If we can keep the rulers on the *qui vive*, anxious to please, then we have democracy. The only device now available is the ballot. But the ballot itself is merely the machinery producing the sensitiveness that is the essence of democracy.

Question: I would like to ask whether the existing machinery is not very defective in the political field, because the ballot has no means of expressing why you vote for the particular man.

Dr. Carver: I should say it falls far short of creating perfect sensitiveness. The man who gets very far up in politics has had to make a pretty fair guess every time, or he did not get any further. Take Mr. Coolidge. He has been tried a good many times; apparently he has guessed somewhere near what the constituents wanted every time, or he would not have risen. So I think we achieve a certain degree of sensitiveness by that selective process.

Question: When you refer to the management which we, as purchasers of the shoes, select do you mean the combined capital-labor-management idea?

Dr. Carver: Whoever is responsible for the general policy of the factory. I should say primarily the so-called manager may determine what style shoes to put out, at what price and, if they do not pay, to decide upon something the public wants.

Question: I understood you to say that the factory or enterprise was established primarily to supply the public with shoes. I wonder if there was not a begging of the question there. I thought it was generally to make money for the proprietors.

Dr. Carver: I do not think there is any conflict. The motive that actuates the management and everybody else is the motive of gain; but that does not interfere with the function of the factory. The function of the shoe factory is to provide shoes, generally speaking. There is some exception to this, but more and more as we perfect our industrial system it will be true that the way to make money is to serve somebody else, say the public. In order to gratify private motive, which

is gain, we must do something that somebody else finds it to his interest to have done.

Question: You have in the organization of a business certain established contacts as between so-called management and employees, that is the managerial mechanism. If that is sensitive, do you think it can be used as an expression of democracy in that industry without superimposing any other machinery?

Dr. Carver: It is just a question of what is the best mechanism for creating sensitiveness under the circumstances of time and place.

Question: In carrying out your parallelism, would you assume that the consumer of shoes really controls the selection of management? Does he in as true a sense as we choose our political authority?

Dr. Carver: I think he does, in just about as true a sense. We do not organize and select candidates, we take our choice among several. In the same way we take our choice among managers. So long as wo do that intelligently, I should say we have democracy. Each candidate is anxious to please. If he does not give us what we want he does not stay in office very long.

Question: In carrying out our political function we not only pay attention to what the man gives in return, but we care something about the method which he uses in giving us that. Your analogy in industry seems to set aside the method. We, as purchasers of shoes, have no interests at all in the method by which shoes are made; we are primarily interested in price. If you combine the three functions, capital, brains and labor into one unit, then perhaps the analogy would be closer.

Dr. Carver: It would; but in the ultimate condition which we hope to arrive at before long, the question of the method of production takes care of itself through the sensitiveness of the management to the interests of their own workers. When the workers have many other chances, and are sought after, they look after the methods of handling the factory, sanitary conditions, etc.

Question: How is sensitiveness obtained of an organism such as an institution that furnishes this light—we have no choice when we want to buy electric illumination.

Dr. Carver: I suppose in this city you have a monopoly partly created by government giving the exclusive right to one company. There you have a mixture of the two things I have been trying to describe. You have to get after the electric light company through the government that gives it the franchise. If you have an absolute monopoly, not created by government, then you are in a bad way. About the only thing I can suggest is to apply the principle of the balance of nature.

Out West, in California, a number of years ago, they gave a bounty of five dollars a scalp for coyotes and pretty nearly cleaned them out. Then they found the jack rabbits were becoming a geater nuisance than the coyotes ever had been. I am a firm believer in the balance of nature as a regulator of monopoly. Play the vote-getter against the monopolists as you play the coyote against the jack rabbit. I do not know of any other way. When a man's competitors cannot take care of him and furnish an adequate check upon his capacity, just warn him that the politician will get him if he does not watch out.

VII

THE ECONOMIC FOUNDATIONS: THE CAPITALISTIC SYSTEM

By Thomas Nixon Carver

I shall not attempt to cover the whole field of capitalism but shall discuss some of the reasons why the term has been such a bugaboo in our modern economic life, and why it is discussed by certain schools as though it were some occult and evil power in the world, just as other things that are not understood are very likely to be thought more or less occult and evil.

In its simplest form the capitalistic system is nothing more than a system of voluntary agreement among free citizens, as distinguished from a system of authority and obedience. Just let people alone and free them from authority and you have the capitalistic system, —at least you have the really essential feature of the capitalistic system, which is the private ownership of tools. If a man has made something, whether it is an article of consumption or an article of production, and no one is permitted to use force against him it is then his own; he cannot be dispossessed without his consent; it is his property. So long as he has to defend his possession with his own strength there is no property; he has no right. When he can appeal to an umpire to protect him, then his possession is guaranteed. When it is understood that there shall be no coercion, then his possession is transformed into property. If the property happens to be a tool, it is capital. If something else, it is not. That is about all there is to it in its elementary or simplest form. That is not all there is to it however in its more highly developed form. That is merely its essence. Without the absence of coercion there is no capitalism, and with it there is, though it might be a very primitive kind of capitalism.

There are two or three things about the development of modern

capitalism not so simple as that. There is the joint stock corporation which, in the last hundred years, has been generally identified with capitalism by some people. As such people think about capitalism so they think about joint stock corporations. Again, they are also thinking of huge industrial enterprises. These two characteristics of the capitalistic system—namely, joint stock ownership and large-scale production—attract so much attention at the present time that it is difficult for the average observer to see the really essential feature of modern capitalism—private ownership of tools.

Anything that is big is likely to be more or less alarming. If it becomes so big that you can really hardly comprehend it you are probably more or less afraid of it. It becomes more alarming the bigger it is, and you begin to be very much afraid of what it will do to you. I think the mere bigness of the modern industrial establishment, the vast number of owners we have under the corporate system of ownership, is too much for some of us to understand. The man who has always worked with his hands and has not taken pains to understand what a big corporation is, who the shareholders are, and how they happen to be shareholders, is very easily misled.

I grew up in a western agricultural community where some farmers thought about banks as many people now think about the big corporation. Banking was a mysterious operation. They did not understand it, so the mere word "bank" was enough to infuriate the average farmer in that community. It was not something that he had studied; he did not know how it was run. There is still much ignorance on that subject. Within the last three or four years I came across a young fellow who did not know how to put money in a bank. He did not know that banks were for men of his type. He was a printer by trade and also a good musician; he played in an orchestra in the evening and from these two sources was taking in between eighty to ninety dollars a week. He was carrying about in his pocket a roll of money, in the modern vernacular, big enough to choke a horse. When it got too big he pealed off enough to buy a flivver or to buy a present for his girl. When someone asked him why he did not put his money in a bank, he said he did not know how to put money in a bank. You will be surprised to hear that there are people of that kind right in sight of the Boston State House.

He was more or less hostile to banks; thought they were rich men's affairs; that they existed not for his benefit but to prey upon him. A great many people feel the same way about large corporations until they understand what they are like.

Now there are one or two rather curious developments, which even practical business men have not perhaps appreciated, in connection with a joint stock corporation. On the face of it, it looks like a highly democratic arrangement. Without some such arrangement as that no one would get the benefit of large-scale production unless he was himself a rich man and could finance the enterprise himself. Everybody else would be shut out. The joint stock corporation, however, gives a large number of men a chance to put their capital together. But it happened—it might have been foreseen—that even then, democratic as it seemed, large numbers of people were below the investment level and could not take advantage of this apparently democratic concern, so that vast numbers of people never got any actual benefit from the joint stock form of ownership. Middle-class people could; it was a sort of bourgeois institution. That could not have been helped; it might have been anticipated. No one could take advantage of it unless he had saved at least a little money to invest in bonds and stocks. Thus, while it profited the middle-class who were able to invest small sums, it has not, in the past, been of any advantage to the great mass of wage earners who were not in a position to invest and did not benefit from what looked, on the surface, like a democratic institution.

Another thing that might have been foreseen was this, it introduced into industry something analogous to what is known as absentee-landlordism in agriculture. (It happens that agricultural economics is one of my specialties, if I have any specialty.) I have not yet found a case where absentee-landlordism did not breed strife between landlords and tenants. It creates an opportunity to develop class consciousness on the part of tenants and class hostility against an absentee landlord whom they do not know personally. Land can be held in large holdings. So long as it is owned by resident landlords there is comparatively little trouble. If the landlord lives on the estate, takes an interest in the surroundings, knows his tenants or his workmen personally and is known by them, that

does not produce a social conflict. There may be questions of wages and rent, but there is no class-conscious struggle between landowners and tenants under those circumstances. Yet wherever you have an absentee landlord you invariably, so far as I know, have a class-conscious struggle and a real or potential class war between landlords and tenants. I think the reasons are ample; but the point I am interested in making just now is that the modern development of capitalism under joint stock ownership has introduced into industry the identical factor of evil that absentee-landlordism introduced here and there in agriculture. It has produced a class-conscious struggle between laborers and capitalists, the workers and the owners. That need not exist and would not exist otherwise, I think. Anything that separates people into groups with no bridging of the gap will always, without exception, cause irritation and misunderstanding, and if there is any issue or any serious irritation, it will precipitate some kind of a class war. If it is a religious difference separating them so they do not mingle or mix and the young people do not marry, that will produce irritation and something approaching class war. Bridge the gap, let them come together and mingle—especially lift the ban on marriage, so the two classes marry, and you do away with the difficulty.

If you are familiar with Roman history you will remember that what finally broke down the distinction between patrician and plebeian was the abolition of the ban on marriage between the two classes. Plebeians grew to be prominent citizens and wealthy, but so long as there was no possibility of marriage between classes there was also a class feeling. The removal of that ban removed the final barrier and slowly eliminated class feeling. I read that a few generations ago Quakers did not permit their young poeple to marry worldlings. So long as that ban lasted the Quakers were a persecuted sect. There was deliberate creation of a gulf between the two religious groups, and wherever such a gulf exists there will be forays over the border, class jealousy, antagonism, and any real source of irritation will cause some kind of a class war. Most of the religious persecution of modern times has been created somehow by a class distinction based on religious grounds, and nature does the rest. It is the source of all race problems. You get two races in contact with one

another, and there are just four possibilities, and no fifth: (1) they can live apart territorially; (2) they can follow different occupations —a sort of caste system; (3) they can amalgamate—that wipes out racial difference; (4) there will be class feeling. There is no case in history, so far as I have discovered, where a fifth possibility ever showed itself. If they will mingle in the same territory, then only three possibilities are left to them: (1) amalgamate; (2) follow different occupations, one race doing one kind of work and another another; (3) fight. If they will not amalgamate nor separate geographically, only two possibilities are left: They can divide up the work; or they will have trouble. If they will not follow separate occupations there is only one possibility: trouble. There is no fifth.

Here is a principle of universal application which works everywhere in all possible conditions and I think we must find the source of what we call our labor troubles just here. If anything separates the workers from the owners, so that there is no bridging of the gap, that is, if they are kept apart in some way it will produce labor difficulty; just as race difference, religious difference, or any other difference that is not bridged will produce jealousy, suspicion, hostility and antipathy.

One of the characteristics of the modern industrial system was the separation of owners from workers. I do not see how we could have prevented it without hindering industrial expansion. In the early development of the joint stock corporation owners were separated from workers. The owners did not know their own workers. If you owned a share in a given corporation you might meet some of the employees on the street and not know them as your employees. The worker might meet his employer on the street and not know him. To the worker, the owners were just some sort of a mysterious force somewhere that took a part of the product of his industry, and he did not know why that force should be there. That situation furnishes the raw material for a social conflict. I have never known a situation of that general description fail to produce hostility; and I have never known that gulf bridged over, when it did not do away with class feeling and class hostility.

After all, human beings are pretty good. We are a mixed lot, but there are some quite nice things about all of us. A story of

Charles Lamb illustrates this point. He once broke loose and spoke severely of some person he did not happen to like. One of his friends said: "Charles, I did not know you knew so-and-so." He stammered, "I do not. I cannot hate anybody I know."

It is really very profound social philosophy that we cannot hate anybody we know. There are some exceptions but, as a general rule, when we get acquainted and know people we rather like them. Take two small boys who meet for the first time. Watch them and see what happens. The first attitude is one of hostility, each putting on a ferocious look to cow the other; then, before long, they are playing together. Two dogs will act the same way. Two grown men will act the same way, only they are polite about it. Our first attitude on meeting a complete stranger is one of aloofness; we do not know whether to like him or not; but after we become acquainted we generally like him—that is a true statement as a statistical average.

Anything that brings people into contact, so they know one another, makes for peace. Anything that keeps them apart makes for hostility rather than peace. The cure for that is to bring them together. I think we are in a position now to effect a cure of the class hostility between labor and capital. I do not see how we could have avoided it in the earlier days of our industrial life under the separation of workers from owners. The workers were not in a position to invest. We had to have joint stock companies and become part owners under the joint stock plan in order to get large-scale production. We are now, as I have tried to show in the last two lectures, where we can begin to bridge this gap. The high wages workers are getting enable them to invest in the shares of our corporations. I am not above mentioning prohibition as another factor. The workers are accumulating capital and are today investing and becoming owners of industry, at least on a small scale. That is the only way the gap can ever be effectively bridged. You can say: "Go to now, let's be friendly"; but friendship is not thus created. A member of the Church Federation once commented on the difficulty of getting rival churches in the same village to unite. He remarked: "There is no use in saying 'Let us unite'; we do not unite that way. We must begin working together, taking a common interest in the same thing and, before we know it, we shall be united."

I think the only method that will ever get workers and owners united in industry is by actually doing the work together; investing in the same shares; managing the same industry; doing things together. That will unite them and they will become pretty good friends before they realize. I believe now is the psychological time in this country for that sort of union. Take the simple matter of labor participation in management. If forced, it will be ineffective. It will come about sooner or later automatically, and will last.

I do not know how to start industries. But if I were going to start an industry and, upon looking around, found ten men for every possible job, I would not have to pay much attention to the question: Where shall I get labor? If it were difficult to get anybody to finance me, I would give a great deal of attention to the men who were in a position to back me, knowing if I did not get one I might not get anyone else. And if it were necessary, in order to get them to finance me, I would even give them a string on my business. I would have to; I could not help myself. But suppose I were facing another situation in which dozens of men had money to invest, had more investible capital than they knew what to do with. If they were convinced that I had a good thing and that I could really run a business, dozens of them would be trying to get me to take their money. Suppose I could face that situation; whereas, on the other hand, men were so scarce and hard to get that I would not know how to secure any help. I do not know what others would do under those circumstances; but I think I know what I would do. If one man did not care to let me have his capital, I know many who would. That question would not worry me. The problem would be where to get any help. Under such conditions I would go first to the men who had help to give or labor to sell and make my terms with them. If they wanted some control over my industry I would simply have to let them have it; that would be wrapped up in the very conditions I was facing. When labor participation comes in that way it comes to stay. It all rests on voluntary agreement between free citizens. I find it to my interest to behave well to my help. Until that is the case, I do not find it to my interest.

I should like to make another perfectly obvious point. Why should anybody pretend that he owns part of a factory unless he is

paid for it? Why should we treat this kind of property differently from any other property? The maid who works in your house, unless she has helped pay for it by putting some of her money into the house, why should she be regarded as part owner? The man who works in your factory has no more claim on it than the maid in your house, unless he has put money into it. Then he is part owner and has a right to a share in it.

Instead of trying arbitrary rules or mass authority, just apply the same principles here followed with everything else. Labor is getting scarce; it is liable to get scarcer as the years go by in this country. That is going to give laborers better wages; if they save and invest their money there is nothing to prevent them from owning shares in the corporation that employs them. Then everything works out automatically and properly. They own the tools with which they work, not specifically, but they own the undivided share just as capitalists now do under the joint stock method. Workers will then understand what capital is. It will not seem such a mysterious force. The two classes, capitalists and laborers, will blend so that there will be no class consciousness. That will be the end of the present phase of our labor troubles.

I do not want to be understood as promising too much. Peace in this world is very difficult to attain because there are so many causes of irritation in every possible relationship. We cannot name any human ties that have not elements of irritation and also of harmony. Any husband and wife have in their relations some elements that tend to bring them together, and also some that split them apart. Who shall have the automobile on a given afternoon? Division of income and similar problems in marriage have always existed. If husband and wife give most of their attention to conflicting interests they will have trouble. On the other hand, if they are mindful of the elements of harmony they will get along very nicely.

Relationship between two beings anywhere involves both elements of harmony and of conflict. We shall have removed one of the great sources of irritation by blending the two classes, laborers and capitalists. There will still be plenty of other causes of irritation, yet class-conscious hostility will then have disappeared at least

so far as employer and employee are concerned. Class war will continue, for example, between educated and uneducated; religious and irreligious; and other similar bodies.

Another phase of the present capitalistic system, more or less connected with the joint stock method of ownership, is perhaps not appreciated as much as it ought to be. The mere bigness of any human organization tends to make it operate more or less impersonally; that can not be avoided. A big army has to work in that way. One of the great sources of irritation on the part of the private soldier in the trenches, in a local situation when some order came from an officer hundreds of miles away, was the feeling of suspicion that the officer did not know the local situation, or he would not have given the order. Local autonomy in such a huge organization is impracticable. Management tends to become impersonal and that always will cause trouble. How to overcome that and make the relationship between the manager in a distant office and the man working at the bench more personal and less mechanical, is one of the problems growing out of large-scale production. Another factor in this problem is not so easily justified, and perhaps we should blame ourselves for not having corrected it sooner. The mere bigness of an institution always gives an increased sense of power to those who direct it. At the same time it gives to the majority, at least, a feeling of divided responsibility.

A generation ago some writers on mob psychology were trying to trace the mental processes which took possession of mobs. They found that men in a mob have an increased sense of power and a decreased sense of responsibility. That is always a dangerous situation, which does not apply to mobs alone but to all large human aggregations. A big concern feels its power and does not have to consider the little men here and there.

We had a good illustration in the papers recently of the California ranchers taking possession of the aqueduct which supplies Los Angeles with water. Of course they were wrong legally; but I know how they felt. Here they were, scattered ranchers—200 miles from Los Angeles, a large city and very independent. Why should a million people pay any attention to two hundred ranchers? The ranchers had some equity in the case, but could get no attention. This great

aggregation of people had the power to ignore them and was ignoring them, because its sense of responsibility was not commensurate with its sense of power. The only thing those ranchers could do was to strike somewhere where they could compel attention. Of course it was unjustified legally; but what else could they do? They were dealing with a huge mass of people having a great sense of power and apparently no sense of their obligation to small groups of farmers.

That is one of the results of these vast aggregations of capital that we get now in some of our modern industries. I think one of the favorable signs of the day is the increased feeling of responsibility on the part of these great combinations. There was a time, not so many years ago, when they apparently felt little responsibility. They were big and more or less independent; it was very difficult for any one to get their attention. About the only way to get the attention of some of those big organisms was by a method similar to that of the ranchers.

These special phases of the capitalistic system, I think, cause the resentment felt against it. If most of them can be removed, I am inclined to believe people will come around to the conclusion that the capitalistic system is pretty good after all.

Wherever developed, the system has eliminated famine and greatly increased the prosperity of all people in those countries. The worst you can say on strictly economic grounds, leaving out these special causes of irritation I mentioned, is that capitalism has not equalized prosperity among all people in a capitalistic country. A generation ago we were hearing speeches and lectures to the effect that the rich were growing richer and the poor poorer—which was not strictly true—but some facts looked in that direction. It is true no longer; the tendency now is toward diffusion. We are rapidly progressing towards greater equality of prosperity. All this is partly attributable to the capitalistic system itself, I think. There is no reason why we should not have just as much equality under it as under any other system. It is just as feasible to work out equality. There is nothing inherent in the capitalistic system to prevent. The fact that it was not done before does not prove anything. It is a relatively new phenomenon which has been growing very rapidly and has not had time to develop normally in an all round way. Given time, I think

we will find that not only will there be a certain degree of prosperity for everybody in this country as there is now, but that prosperity will tend toward equalization and thus remove the only real economic objection to capitalism. The other objections are not strictly economic but more or less psychological; some of them are moral.

In the first place, I think, the people who have hitherto been opposed to capitalism are learning a little more about it. It is not so mysterious as it used to be. In the second place, instead of the joint stock corporation being the means of separating people by creating a system of absentee ownership, that gulf is being bridged. Both classes are blending more and more and class lines are not so sharply drawn as they were years ago. The growing sense of responsibility on the part of corporate managers is at least tending to catch up with the increased sense of power that came long ago, and all these things working together will enable most of our people to see the good in capitalism. The Western world will continue to progress in the direction of capitalism and will not turn back on its tracks. I am not certain what the Orient is going to do. I think there is a fair chance—beginning with Russia—that they may try something entirely different. I hope they will not starve too many people to death, but I am perfectly sure that nothing but capitalism can abolish famine.

We can get rid of some of these special phases that have produced irritation. We will preserve the principle of voluntarism, under which no man shall be coerced and no one give up anything which he has produced, without his consent. If he makes a thing under this system it is his; if he buys it, it is his also because the former owner has given up possession. That is the capitalistic system under which the world has progressed farther in 150 years than in all previous time under all other systems.

DISCUSSION

Question: To what extent is it possible for the service motive to replace the profit motive in capitalism and, therefore, tend to equalize the distribution of wealth?

Dr. Carver: There is no more reason for substituting service for profit than for substituting service for wages. Profit is merely the form in which one man gets

his income; wages are the form in which another gets his income. It is astonishing how much confusion of thought just such words cause. When somebody suggests that under government ownership things are run for service and under private ownership for profit, he is guilty of one of the greatest logical fallacies possible. So far as the motive of the man who runs the business is concerned, there is no difference between the motives of the Postmaster General and the president of a railroad. We will say that the predominant motive of the man running the railroad company is desire for profit while the Postmaster General's is desire for salary—one is just as selfish as the other. The next question is: How can the Postmaster General be certain of holding on to his salary? He must make people think he is giving them good work, that is, service. How can whoever makes profit out of a railroad company be certain to get his profit? By making the railroad serviceable. If he does he will get a profit, otherwise not.

Question: Is it not true that you can draw a distinction between the man whose one motive is the amount of money he can make and the other man who is also actuated partly by desire to be of some use? Is what they are after not satisfaction?

Dr. Carver: I agree to that. The man who works partly for money, partly for the love of the work, partly for the esteem of his fellows, is a better man than he who works for a single motive. The desire for esteem, if not carried to excess, is a good motive to mix with the others. All people like to be well thought of. However, my point is that you are just as likely to find those good motives mixed with the bad in private as in public business. There is no more reason to expect to find a larger admixture of the good motives in the manager of a public than in the manager of a private concern. You do not find it, as a matter of fact. Then, I think you ought to be a little careful about proposing to substitute other motives for cash motives. The cash motive is one of the best in the world when properly balanced with other motives. Do not affect to despise the desire for money. Suppose you had to make a hard choice and give up absolutely everything you now get that is supplied from the cash or pecuniary motive on the one hand, or give up everything you now have that is supplied from a non-pecuniary motive. Which things would you give up?

Question: The cash. That cash motive is a matter of exchange of goods, not merely the pursuit of wealth.

Dr. Carver: I would not give up the things that are produced for cash. You would not live very long if you had to give up the things supplied in cash. Suppose an employer were to say to his employees: "Now men, money is something very low; the desire for money is not worthy of good workmen. Work for something better than money." Would they not suspect him of trying to get them to work for very little so as to obtain the money himself? On the other hand, suppose

someone says to the employer: "It is not proper to work for profit. Work for something else." He would have the same right to suspect the person giving that advice of having a pecuniary motive.

Question: Do you feel that the money incentive is by all odds the first incentive? Do you feel that another motive runs a close second? If so, what is it and why?

Dr. Carver: I think the next is liking for the work itself. Those two motives sometimes run a pretty close race. We would all rather do the kind of work we like than what we do not like.

Question: Do you see any way out of the divided responsibility on the part of the large corporation?

Dr. Carver: I cannot see that we can do anything to the mechanism, either of a corporation or a government. It seems to me, we simply have to fall back on an increased sense of responsibility.

Question: What would be the modus operandi?

Dr. Carver: The point I tried to make at the last lecture bore somewhat indirectly on that, when I discussed the factor of sensitiveness in democracy. If the government is a means by which the governing power is made sensitive to the interests of all the people governed, that is really the whole of democracy. I do not think the ballot is the best means of creating sensitiveness in industry, though it might be in certain cases. I think the changes I suggested as actually taking place will automatically render management much more sensitive to their own employee's interests; that is, when the employee has a way of making his interest felt.

Question: If that condition continues to develop, what mechanism is there for making the workers sensitive?

Dr. Carver: You are running into a difficulty here which may be just as bad as the one you are escaping. But I think there is an ultimate way out, although it will take some time. The growing scarcity of labor will make laborers more independent and arbitrary than they were in the past—the feeling of independence comes from power. The new sense of power is always likely to go to people's heads. That, I expect, will be the first result. Later on when laborers begin to observe they check one another up. If the weavers are not getting work enough because the spinners are not keeping up, the weavers will get after the spinners—and work out the balance of power in that way.

VIII

THE ECONOMIC FOUNDATIONS: HOW WORKERS CAN BECOME OWNERS OF CAPITAL

By Thomas Nixon Carver

There is one point which I want to stress at the beginning of this lecture—that is, the necessity of changing our whole attitude toward the labor problem. It is a rather sweeping statement to say that everybody needs to change his attitude toward that problem and approach it from a different angle than before.

We must get over the notion that labor is a peculiar problem in itself and that the laborer is to be treated in any way different from other people. The precursors of Adam Smith,—the Pre-Adamites, as they are sometimes called,—wrote about labor—cheap labor—very much as they would write about cheap coal, or cheap building material, or something of that kind. Adam Smith at least started the new point of view. Yet the old point of view persists, not simply on the part of those who think that industry needs cheap labor, even the friends of labor itself (I do not know of a single exception) continue to think of labor as somewhat different from the rest of us and of laborers as being unlike other people. You may deny this but, unless you differ from the people who write about the labor problem, I think I can convince you of it in spite of denial. We still hear it said—not by the friends of labor however, but by a great many people—that we must have an abundant supply of cheap labor in this country in order to build more buildings, more waterpower sites, more plants for the extraction of nitrogen from the air, and that sort of thing. We need "cheap labor," they say. Now, of course, from the standpoint of economic analysis we need no cheap labor, but plenty of cheap employers—cheap business talent of a high order. That would do much more for industry than cheap labor could possibly do. If we just think of the average laborer as of equal importance in every

respect to the average employer we will get this point. When we say, for example, agriculture needs more immigrant labor, we are thinking in terms of the farmer but not in terms of the farm hand. The farm hand does not need more immigrant labor; he needs less. Fewer immigrants would mean a better job for him, and better wages.

Even the professed friends of labor usually think of the laborer and of his place in society as somewhat unlike that of the owner of the plant. Or put it this way. Suppose there is a pacifist of the extreme sort, who thinks an ammunition factory is an evil institution. Would he attach the same blame to the men who work in that factory as to the owner who finances it, or would he not? If he thinks of laborers as he thinks of other people, he would have to attach the same blame to the workman as to the employer, for both are equally responsible. Of course, some temperamental rebels never think consistently on any subject. Let us assume the case of one who thinks a distillery which produces whiskey does a great deal of harm. If he is the common sort of temperamental rebel he would have repeatedly stated that labor produces all wealth. Of course that statement would carry with it the proposition that labor produces all whiskey. If labor produces all whiskey, labor does all the harm whiskey does; capital does not produce whiskey. If capital produces no wealth, then and therefore capital does none of the harm whiskey does. That is the way a rational critic would reason if he accepted the premise that labor produces all wealth and capital none; but a temperamental rebel need not be consistent.

Take two temperamental rebels, one of whom a prohibitionist who thinks whiskey harmful, the other an anti-prohibitionist who thinks whiskey good. The latter would say that if any good is done by whiskey, the laborer who works in the distillery is responsible for this good. Labor produces all wealth, therefore, labor produces all the good whiskey does. The former, being also a temperamental rebel, would start with the same proposition that labor produces all wealth, but he would not reason it through. Now, the fact that they talk thus means they do not hold laborers to the same high responsibility to which they hold other people. They make excuses for labor which they will not make for others. They are still thinking of laborers as unlike other people. So when talking about doing some-

thing for labor, they generally expect to treat the laborer somewhat differently from the way they treat other people.

Of course, in a militant age the only freeman was the strong fighter; he had to be able to defend himself or he could not be free. All poor fighters and non-fighters, in order to live at all, had to put themselves under his protection, swear loyalty and fealty to him and give him service in return for defense and support. Under these circumstances, naturally, the fighter and non-fighter were in different categories and were treated differently.

In a state where labor is chronically oversupplied the laborer is not able to take very good care of himself. He can only put himself under the protection of a patron and offer his service and allegiance in return for subsistence. Under such conditions, of course, labor is not a commodity. A personal relationship of loyalty and fealty exists between the patron and the client. There is nothing else to do about it. However, when conditions improve economically, or in other words, when labor gets scarce and hard to find, and as jobs multiply, the laborer himself insists upon being a free man and doing what other men do—that is, sell his labor to the highest bidder. When the worker himself takes that attitude, there is no reason why the employer should assume further responsibility. He is beginning now to regard the laborer as an equal, in one respect at least, and treat the laborer just as he treats other people. As conditions increasingly improve, that tendency grows and becomes practically universal. Whatever Acts of Congress may say to the contrary, when conditions are good as they improve, the laborer more and more insists upon treating his labor as a commodity—to be sold to the highest bidder, or sold in the best market. He no longer feels bound by ties of loyalty; and the patron no longer feels bound to give support, when it does not pay—as was necessary under an older and more primitive industrial régime.

Because for many centuries labor had been looked upon as a kind of national resource—to be used like soil and minerals, waterpower, forests and similar means for the building up of industry—the habit of regarding labor as somewhat different from other human factors in industry, and of laborers as unlike other people became so fixed as to vitiate all our thinking. A complete change in point of view is

now necessary for a proper understanding of what is coming in this country.

Stop thinking altogether of labor as a resource—most people have already. If we want to import labor, let us import the kind that is scarce. In other words, we need immigration of employers, such as the Philippines have from the United States. They have immigration; but manual workers do not go from this country to the Philippines. Technicians and business managers go, and in the Philippines they are the immigrants. It is to the interest of the manual workers of these islands that Americans of the employing class should immigrate. It is just as reasonable to talk about immigrants from the United States into the Philippines as to talk about immigrants from Japan into the United States. The only difference is one of class. If we are able to divest ourselves of the idea that there is some essential difference between the two classes, then we shall have no difficulty in thinking of both as somewhat alike.

Employing talent is scarce in the Philippines and relatively abundant here—therefore it is perfectly natural for the employing talent to migrate thither. Manual labor is scarce here relatively to other countries, consequently it moves hitherward. In every particular the principle is alike. It operates the same way, with the same results, in labor as in any commodity. In fact, in international trade labor is a commodity, and the labor of the employer is as much a commodity as that of the manual worker. It follows the laws of trade, of supply and demand, and should do so if we can get to thinking about labor just as we have about everything else.

When we talk of ways by which labor can become a partner in industry, most of us still think in the old terms. Now any ordinary man becomes a partner in industry through buying an interest in it. We would not be racking our brains to find out how business men could acquire a partnership in a street or a steam railway company, or a steel mill, or any similar enterprise. We know perfectly well how it is done. If some group of social workers were to try inventing some plan whereby business men and merchants might acquire a kind of partnership in the Pennsylvania Railroad Company, they would soon be turned down by the business men themselves who know how to acquire partnership if they want to.

If we think of labor as we think of other people, we would no more consider inventing new ways by which labor can acquire partnership in an industry than we now consider trying to devise plans by which other people obtain partnership. We act thus because of our old ancestral habit of thinking. If any other method is designed for laborers themselves it will be artificial, forced upon industry; it will not be natural and automatic, but will have to be continually doctored up and changed in order to last. It will be based upon somebody's sudden enthusiasm and when that oozes out and the scheme is forgotten, some new enthusiast will try something else. But when ownership does not have to be forced by special commissions or philanthropic agencies, then it just happens naturally.

How does a man own his automobile? He buys it. Would you waste any time trying to figure out how working men might become owners of automobiles, except just by the ordinary method of purchase? That is good enough, is it not? Why treat the laborer in this relationship differently from anybody else?

I admit there may have been excellent excuses for this old habit of thought in its day. I pointed out before that the joint stock corporation while it looked, on the surface, like a highly democratic method of business organization making it possible for large numbers of people to become joint owners in a great enterprise, was democratic only down to a certain level. The people below the investment level were too poor to buy even a small share in order to become joint owners. So we did not acquire the habit of thinking of the joint stock corporation as a means by which labor might obtain ownership of their own tools. We now see wage earners being elevated into the investment class. When that happens, as already has happened in a multitude of cases, that which was a democratic thing for the investing class, has now become a democratic thing for all classes. In other words, we are all becoming middle-class-bourgeoisie, which means that practically every one in the country is or soon will now be in a position to take advantage of the joint stock form of organization. A generation ago this could not have been done and cannot be done now in any country except ours, or Canada, or Australia, because in other countries wages are too low and wage earners cannot afford to invest. I want to summarize this argument rather pointedly. The

great thing, of course, is to raise the wages of labor. That is not done by any hokus-pokus nor by merely saying, "Now, let us raise wages." It is done by increasing the demand for and decreasing the supply of labor. There is no other permanent way which works automatically.

By stimulating the demand for and restricting the supply of labor and by raising wages we do a great many other things at the same time. Among the most significant results is the one I have just pointed out of lifting the whole laboring class into the investing class. Laborers can then take advantage of the joint stock form of organization and become owners of gigantic tools and participators in the ownership of great industries. That is a considerable achievement which amounts to an economic revolution such as is not possible elsewhere in the world today. The only economic revolution that amounts to a hill of beans is the one now going on in this country, and there is no sign as yet that any such economic revolution will take place in any other country.

I think this process will destroy the last remnant of the old habit of thinking. Laborers themselves rather resent the idea of being treated differently from other people and of not being held to the same accountability. They could not help themselves when wages were low because labor was chronically oversupplied. Of course they were willing to take advantages not applied for by others. They do not want that now; they would rather be treated as other people and held to the same accountability. They prefer not to be babied. Yet we will continue babying them until we change our whole attitude in the direction which I have been trying to argue in the last few minutes.

I remember an incident when I was quite young—merely a boy—along this line. Something had happened in our neighborhood. A wealthy man had had a controversy with a poor man. It turned out that the courts decided the rich man was right and the poor man was wrong (and he probably was). There was a good deal of feeling about it; I thought a great deal about it myself, and I burst out one day and said something severe about this rich man having things his way. My father was, I still think, a pretty wise man in his day, though not blessed with a college education. He was not a rich man at all, but I think he still had that innate dignity that belongs to every

sound thinker. I am perfectly certain he never expected any concessions because he was not rich or because he worked with his own hands; and he worked pretty hard. After I had blown off steam, he remarked, "It is just as important for a poor man as for a rich man to do right." That seemed a perfect truism, of course. I wonder how many of us take that to heart and apply it? Are we not slightly more inclined to make excuses for a poor man than a rich man? Are we not a little disposed to hold the rich to stricter accountability than the poor?

Suppose one rich merchant here in New York should picket a rival store, inform customers that that store was unfair, or make some statement designed to discourage people from going in without threatening them with physical harm if they did. I wonder how many of us would justify that? Why not? Well, he is rich. Is there any other reason? It is fundamentally wrong. But suppose a working man did the same thing. I wonder if a good many people would apologize; put him in a different class; hold him to different accountability. That is not treating labor in a dignified way, nor the laborer as a full-sized man. It is showing the pity for labor we show for children. That sort of pity comes from a feeling of superiority. Of course, we show this kindly feeling to children but, after all, it is coupled with the understanding that they are weak and we must make allowances. That is not treating them in the most dignified manner. Of course, I have heard a great deal about what laborers want; what is on their minds; what they demand. The more I study, the more I find that one of the things they want is just to be treated as full-sized men, accepted as full citizens, not only with the same rights but with the same responsibilities as other people. Naturally there are some counteractions to that. Ask a laboring man to pay taxes; it is not always welcome to him. Taxes are not welcomed by any of us, but I think we would all feel a little ashamed if we were exempted in some way. We would gladly save the money; yet at the same time we would not feel altogether comfortable to think that in the matter of taxes we were not held to the same responsibilities as others. And the laborers feel the same way.

I suppose everybody here long ago got rid of the idea that labor is a resource, to be utilized as other resources are. Yet a great many

people in the country have not. I remember attending a meeting of the Cotton Manufacturers' Association where it was seriously argued that the cotton industry could not grow and expand as it ought to unless so many immigrant laborers entered annually. That was a vestige of the old habit of thinking. It would have been just as legitimate for a group of cotton mill workers to get together and say, we cannot all find employment and support our growing families in the cotton industry unless we can import a certain number of cotton manufacturers and a certain amount of capital to go into the cotton manufacturing business every year.

Most of us have outgrown that way of thinking. Still many of us are interpreting the labor problem in terms of a psychology which regards laborers as unfortunate and unable to take care of themselves and, therefore, needing some concession. Some of us have even learned to use the word "exploitation" in connection with the use of capital. It would be well to begin asking ourselves under what conditions can capital exploit labor and under what conditions can labor exploit capital? The mere fact that we have some capital gives us no power whatever to exploit labor. It may, or may not, according to circumstances. There are circumstances in which capital gives us some power. The mere fact that we have labor to sell gives us no power to exploit capital, though under some circumstances it does.

Historically it is true that during the greater part of the controversy between capital and labor conditions have been such that capital had a little more chance to exploit labor, than labor had to exploit capital. There have always been cases to the contrary. A student of the problem always understood what the circumstances were. He has also realized that it was possible to make those conditions general under which labor could not be exploited and under which the very term "exploitation by capital" would be out of place,—conditions under which neither has an advantage over the other; where they could meet on equal terms, man to man and make their arrangements as free citizens, neither having any power to exploit the other.

One capitalist who has considerable capital and lives in a community where there is a great deal of labor and very little capital, will have some power to exploit the laborers of that community.

Why? In no sense is it because of the capitalistic system; it is rather because of the lack of it. A thousand capitalists would not have the power to exploit labor. If there were only one, he would have this power. In a community where a thousand capitalists are anxious to lend money to the farmer, no one would have the power to exploit him.

When there is a wheat famine and you happen to have some wheat, you have some power to exploit the consumers. It is not because of your ownership of the wheat; that is not the outstanding fact. The conspicuous fact is the lack of other owners of wheat who have wheat to sell. Increase the number with wheat to sell and that power of exploitation is all destroyed. In a time of superabundance of wheat, the buyer has power to exploit the grower,—things are out of balance again. It is simply a matter of balance. The indispensable person can generally get what he wants. The superfluous person has to take what he can get. If you are a wheat grower and there are too many wheat growers, you individually are superfluous. Ask yourself in that situation: How much worse off would the country or the world be if I stopped growing wheat? No worse off. How much are you then worth as a wheat grower? Nothing. Take another situation with not enough people growing wheat, and the world hungry for it. How much worse off would the country then be if you quit growing wheat? A great deal worse off.

During the greater part of the history of labor, labor has been so oversupplied that individually every laborer was superfluous. Any individual laborer could emigrate and the country would lose nothing; he was not needed. That would be just as true with a communistic as any other society. If ours had been a communistic society during the sugar shortage in the world war, cranberry growers would have been just as superfluous as they would have been in a competitive society. Other individual laborers may be superfluous for the same reason.

These are basic truths which lie deeper than the forms of social organization, deeper even than government. The superfluity and the indispensability would exist as definitely in a communistic as in a competitive society. It is a physical fact, not a matter of market organization. Price is the form in which superfluity and scarcity

express themselves. In a communistic society they would have to be expressed in some other way because there is no buying nor selling. Some political agitation would be needed to check the oversupply of the superabundant and increase the supply of the scarce thing. If a communistic society has more hod carriers than it can use, that fact could not express itself in the rate of wages because there are no market wages. It would have to express itself in some political adjustment thinning out the hod carriers and increasing the masons. In a competitive society it expresses itself on the market in the form of price for the different kinds of labor.

Because labor has been oversupplied in the past and, individually considered, laborers were more or less superfluous, they had to take what they could get. That put them, of course, in a bad situation. It was perfectly proper, at that time, to think of them as being in a hard position, needing more care than other classes. The time is coming, I think pretty rapidly in this country, when that condition will be cured. I fear that in spite of this fact we will still continue in our old habit of thinking of labor as being exploited when *we* may be the exploited; as being in a weak when it is in a strong position; as needing sympathy when it may need none whatever; or as calling for some kind of governmental policy which we would not apply toward other people. This fear of mine that the old habit of thought will persist, points directly at the problem confronting us: How can the workers become the owners of their tools?

If we stop thinking of laborers as different from other people and just think of them as like the rest of us, that answers itself. When they get wages sufficient to enable them to save and invest, we need not lie awake nights devising ways in which this can be done. The laborers just do it of their own accord. We may simply work with the laws of economics instead of against them by encouraging the laborers to invest.

A few years ago a gentleman from Seattle was giving me a unique argument against prohibition. It ran like this: In the old days the lumberjacks came down from the woods after several months of steady work and with several hundred dollars in their pockets. They would go on a spree and it did not take them very long to get rid of their money. When they sobered up they would find themselves

out of cash and be ready to go to work again. Under prohibition they cannot get rid of their money for weeks and weeks, and will not go back to work until they have spent it all. Anybody may accept that as an argument against prohibition if it appeals to him.

What appealed to me was the need for some evangelism in that situation, to teach the laborers to salt money down when they had it; to save instead of waste—in other words, to invest. They would then become capitalists in a small way and benefit themselves in two ways: first, by receiving a little interest on their savings deposit ($100 at 4 per cent is $4; that is not much, but it is $4) in addition to wages. The larger advantage, not so easily seen, is that this saving adds to the supply of capital in the community, which acts on the market for labor as a supply of sugar does on the market for cranberries. Two things have to be combined. If the supply of one be large, that calls for a large supply of the other. If one be scarce, that limits the demand for the other. When capital is scarce it restricts the demand for labor. When capital is abundant it increases the demand for labor. That is the larger good those workingmen would get from saving and investing their money or letting it be invested by sound bankers. That would not require any particular study of methods and plans by which they might become owners. The method and plan is there, just as it is provided for us, if we have the wisdom to save a little money and invest it.

Laborers need no more help than the rest of us, except information —and we all need sound advice. Beyond that no machinery has to be invented, so far as I can see, to make them participators in the ownership and management of enterprises. I believe this participation must come in the way described if it is to last. To force it by any other device is merely to rely on continued effort on somebody's part to keep a new system going.

I make one possible exception, although I do not think it an exception: that is, in the form of the Blue Sky Laws. Of course multitudes of people do not know how to invest. When such a person has money to invest, it is a challenge to every scoundrel in the country. He will try to get that money. A Blue Sky Law that even *helps* to protect laborers against such scoundrelism is some aid because laborers are as uninformed as are others, who are not manual laborers, in the matter of sound investments.

The restriction of immigration and the Blue Sky Laws I regard as the two most constructive pieces of legislation this country has enacted within this generation. They go to the point. They touch the vital spot in the problem. The one tends to encourage the accumulation of capital and make it abundant. The other tends to restrict the supply of labor and make it scarce. Together they tend to reduce ultimately the rate of interest going to capital and to raise the rate of wages going to labor. The diffusion of prosperity carries with it automatically the power to own or control or become partners in the management of industry.

DISCUSSION

Question: Speaking of special consideration being given to labor. Is it true that labor has demanded and still demands special privilege?

Dr. Carver: The spokesmen, either self-appointed or elected by labor, demand a great many things the laborers themselves would not demand. I do not know that laborers differ from the rest of us in this respect.

Question: Do you think that labor unions are fair when they demand favors from employers?

Dr. Carver: No, but I would not say that is their only function, though it seems to be one of them.

Question: Do you class all their demands as favors?

Dr. Carver: Any demand you cannot get without some sort of coercion is asking for a favor; any demand that you can make to someone's interest to grant is not a favor.

Question: Some employers through labor representation have given voluntarily to employees concessions, which other employers have given only through compulsion. Was the compulsion to the same end unjustifiable?

Dr. Carver: I should think so.

Question: How about the compulsion which results from collective bargaining?

Dr. Carver: If it is only collective bargaining, that is one thing. If it is collective bargaining with a threat of physical injury, that is another thing. We

would excuse people from using some force or compulsion under extreme circumstances. When labor is in a very necessitous position we would certainly make excuses that we would not make if laborers had good jobs and good wages.

Question: Will laborers be in the same position as capital before long?

Dr. Carver: I am inclined to think they will. It is coming faster than you realize. We are training so many men for high business positions; we are now accumulating so much capital, that it will be pretty difficult to stand the competition of your fellow men in business. It is so hard to get labor that *you* might (that is, the employer himself, who is in a plight) even some of these days need our sympathy. We have already reached the time, I think, for discussing the question when collective bargaining ceases to be a means of defense and becomes a means of extortion.

Question: You said, a long time ago in the past there had been an oversupply of labor. Wasn't it really an undersupply of capital, so that available labor could not be used?

Dr. Carver: They really mean the same thing. Economists were relativists before they heard of Einstein. There is never an absolute oversupply of anything, so far as I know. Oversupply is relative.

Question: Would it be a fair summary of your four evenings with us to say that the kernel of it all is proportionality?

Dr. Carver: Yes, I think that is a principle of very wide application. Every human motive is a good motive in its place and properly balanced by something else. The Greeks summarized it in their philosophy of life: Nothing in excess. Nothing in excess—in your motives, in your food or consumption, anywhere—everything in the proper relation, properly balanced. If we can adjust our industrial system so that everything is in a state of balance, for the purpose we have in mind, then no class will ever have any advantage over any other class. There will be diffusion of prosperity among all and we need not make special excuses for one class that we do not make for another. We can then treat them all alike, hold them to the same standard of responsibility, treat them as men.

IX

THE PSYCHOLOGICAL FOUNDATIONS: CONSTRUCTIVE CONFLICT

By M. P. Follett

The subject I have been given for these lectures is *The Psychological Foundations of Business Administration*, but as it is obvious that we cannot in four evenings consider all the contributions which contemporary psychology is making to business administration—to the methods of hiring, promoting and discharging, to the consideration of incentives, the relation of output to motive, to group organization, etc.—I have chosen certain subjects which seem to me to go to the heart of personnel relations in industry. I wish to consider tonight the most fruitful way of dealing with conflict. At the outset I should like to ask you to agree for the moment to think of conflict as neither good nor bad; to consider it without ethical prejudgment; to think of it not as warfare, but as the appearance of difference, difference of opinions, of interests. For that is what conflict means—difference. We shall not consider merely the differences between employer and employee, but those between managers, between the directors at the Board meetings, or wherever difference appears. As conflict—difference—is here in the world, as we cannot avoid it, we should, I think, use it instead of condemning it, we should set it to work for us. Why not? What does the mechanical engineer do with friction? Of course his chief job is to eliminate friction, but it is true that he also capitalizes friction. The transmission of power by belts depends on friction between the belt and the pulley. The friction between the driving wheel of the locomotive and the track is necessary to haul the train. All polishing is done by friction. The music of the violin we get by friction. We left the savage state when we discovered fire by friction. We talk of the friction of mind on mind as a good thing. So in business, too, we

have to know when to try to eliminate friction and when to try to capitalize it, when to see what work we can make it do. That is what I wish to consider this evening, whether we can set conflict to work and make it *do* something for us.

There are three main ways of dealing with conflict: domination, compromise and integration. Domination, obviously, is a victory of one side over the other. This is the easiest way of dealing with conflict, the easiest for the moment but not usually successful in the long run, as we can see from what has happened since the War. The second way of dealing with conflict, that of compromise, we understand well, for it is the way we settle most of our controversies; each side gives up a little in order to have peace, or, to speak more accurately, in order that the activity which has been interrupted by the conflict may go on. Compromise is the basis of trade union tactics. In collective bargaining, the trade unionist asks for more than he expects to get, allows for what is going to be lopped off in the conference. Thus we often do not know what he really thinks he should have, and this ignorance is a great barrier to dealing with conflict fruitfully. At the time of a certain wage controversy in Massachusetts, the lowest paid girls in the industry were getting about $8.00 or $9.00 a week. The demand made by two of the representatives of the girls was for $22.40 (for a minimum wage, note), obviously too great an increase for anyone seriously to think of getting at one time. Thus the employers were as far as ever from knowing what the girls really thought they ought to have.

But I certainly ought not to imply that compromise is peculiarly a trade union method. It is the accepted, the approved, way of ending controversy. Yet no one really wants to compromise, because that means a giving up of something. Is there then any other method of ending conflict? There is a way beginning now to be recognized at least, and even occasionally followed: when two desires are *integrated*, that means that a solution has been found in which both desires have found a place, that neither side has had to sacrifice anything. Let us take some very simple illustration. In the Harvard library one day, in one of the smaller rooms, someone wanted the window open, I wanted it shut. We opened the window in the next room where no one was sitting. This was not a compromise because there was

no curtailing of desire; we both got what we really wanted. For I did not want a closed room, I simply did not want the north wind to blow directly on me; likewise the other occupant did not want that particular window open, he merely wanted more air in the room.

I have already given this illustration in print. I repeat it here because this instance, from its lack of any complications, shows my point at once I think. Let us take another illustration. A Dairymen's Coöperative League almost went to pieces last year on the question of precedence in unloading cans at a creamery platform. The men who came down the hill (the creamery was on a downgrade) thought they should have precedence; the men who came up the hill thought they should unload first. The thinking of both sides in the controversy was thus confined within the walls of these two possibilities, and this prevented their even trying to find a way of settling the dispute which would avoid these alternatives. The solution was obviously to change the position of the platform so that both up-hillers and down-hillers could unload at the same time. But this solution was not found until they had asked the advice of a more or less professional integrator. When, however, it was pointed out to them, they were quite ready to accept it. Integration involves invention, and the clever thing is to recognize this, and not to let one's thinking stay within the boundaries of two alternatives which are mutually exclusive.

Take another case. There is sometimes a question whether the meetings of Works Committees should be held in the plant or outside: the argument for meeting inside is the obvious advantage of being near one's work; the argument against, the fear of company influence. I know one factory that made what I consider an integration by having the meetings of the Works Committee held in the separate club building of the employees situated within the factory grounds. Here the men felt much freer than in any other part of the plant.

A friend gave me this example. He was called on jury service in a murder trial. The district attorney asked him if he had any objection to capital punishment. He replied, "Yes, definitely so." The "conflict" was then on, for the judge thought this opinion incapacitated him for service in a murder trial. My friend summed up the incident to me in these words: "After the judge had subjected me to a

kind of cross-examination, I was put into the jury box, but neither the judge nor myself was left as victor; the experience had changed us both. We found the solution instead of vindicating the pre-judgment of either of us; the solution being that it is possible to render a verdict in accordance with evidence so that you need not evade your duties as a citizen whatever your opinion of capital punishment."

By far the most interesting examples of integration which have come to my attention recently were four sent to the *London Times* last summer by Gilbert Murray, four integrations which he had found in the Report of the Dawes Committee. We have not time to discuss these although I think it would be profitable to do so, but I have some copies here, if any of you would care to see them.

It is often difficult to decide whether a decision is a true integration or something of a compromise, and there is a flaw I think in one of these four cited by Gilbert Murray. But signs of even partial integration, signs even that people want integration rather than domination or compromise, are encouraging.

Some people tell me that they like what I have written on integration, but say that I am talking of what ought to be instead of what is. But indeed I am not; I am talking neither of what is, to any great extent, nor of what ought to be merely, but of what perhaps may be. This we can discover only by experiment. That is all I am urging, that we try experiments in methods of resolving differences; differences on the Board of Directors, with fellow managers or heads of departments, with employees, or in other relations. If we do this, we may take a different attitude toward conflict. The key-word of psychology today is desire. If we wish to speak of conflict in the language of contemporary psychology, we might call it a moment in the interacting of desires. Thus we take from it any connotation of good or bad. Thus we shall not be afraid of conflict, but shall recognize that there is a destructive way of dealing with such moments and a constructive way. Conflict as the moment of the appearing and focussing of difference may be a sign of health, a prophecy of progress. If the Dairymen's League had not fought over the question of precedence, the improved method of unloading would not have been thought of. The conflict in this case was constructive. And this was because instead of compromising, they

sought a way of integrating. Compromise does not create, it deals with what already exists; integration creates something new, in this case a different way of unloading. And because this not only settled the controversy but was actually better technique, saved time for both the farmers and the creamery, I call this: setting friction to work, making it *do* something.

Thus we see that while conflict as continued unintegrated difference is pathological, difference itself is not pathological. The fights in the Democratic convention were a hopeful sign for the Democratic party. What I think we should do in business organization is to try to find the machinery best suited for the normal appearing and uniting of diversity so that the difference does not stay too long crystallized, so that the pathological stage shall not be reached.

One advantage of integration over compromise I have not yet mentioned. If we get only compromise, the conflict will come up again and again in some other form, for in compromise we give up part of our desire, and because we shall not be content to rest there, sometime we shall try to get the whole of our desire. Watch industrial controversy, watch international controversy, and see how often this occurs. Only integration really stabilizes. But by stabilization I do not mean anything stationary. Nothing ever stays put. I mean only that that particular conflict is settled and the next occurs on a higher level. Psychology has given us the phrase "progressive integratings;" we need also the phrase progressive differings. We can often measure our progress by watching the nature of our conflicts. Social progress is in this respect like individual progress; we become spiritually more and more developed as our conflicts rise to higher levels. If a man should tell you that his chief daily conflict within himself is—Shall I steal or not steal?—you would know what to think of his stage of development. As someone has said, "A man is known by the dilemmas he keeps." In the same way one test of your business organization is not how many conflicts you have, for conflicts are the essence of life, but *what* are your conflicts? And how do you deal with them? It is to be hoped that we shall not always have strikes, but it is equally to be hoped that we shall always have conflict, the kind which leads to invention, to the emergence of new values.

Having suggested integration as perhaps the way by which we can

deal most fruitfully with conflict, with difference, we should now consider the method by which integration can be obtained. But before we do that I want to say definitely that I do not think integration is possible in all cases. When two men want to marry the same woman, there can be no integration; when two sons both want the old family home, there can usually be no integration. And there are many such cases, some of little, some of great seriousness. I do not say that there is no tragedy in life. All that I say is that if we were alive to its advantages, we could often integrate instead of compromising. I have a friend who annoys me in this way. She makes a statement. I say, "I don't agree with that because . . . . ," and I intend to give my reasons, but before I have a chance she says, "Well, let's not fight about it." But I had no intention of fighting.

If then we do not think that differing necessarily means fighting, even when two desires both claim right of way, if we think that integration is more profitable than conquering or compromising, the first step toward this consummation is *to bring the differences into the open.* We cannot hope to integrate our differences unless we know what they are. I will give some illustrations of the opposite method—evading or suppressing the issue.

I know a factory where, after the war, the employees asked for a five per cent increase in wages, but it was not clear to either side whether this meant a five per cent raise over present wages or over pre-war wages. Moreover it was seen that neither side wished to know! The employees naturally preferred to think the former, the managers the latter. It was some time before both sides were willing to face the exact issue; each, unconsciously, hoped to win by keeping the whole problem hazy.

One of the longest discussions I ever heard on a Minimum Wage Board was in regard to the question of carfares to and from work: first, whether this item should be included at all with board, lodging, etc., in a cost-of-living budget, that is, whether transportation to and from the plant should be a cost on production. When finally it was decided to leave the item in and allow sixty cents a week for it, instead of the dollar and twenty cents which the ten-cent Boston carfare would necessitate if this item were to be allowed for in full, it seemed to me a clear case of evasion or suppression. That is, the

employers were not willing to face at that moment the question whether wages should include transportation. I sat on that board as a representative of the public, and I suggested more than once during the discussion that we should find out whether most of the girls in that particular industry did live near the plant or at a distance too great for walking. Also I suggested that we should find out whether, if they lived near the plant, the cost of board and lodging in that neighborhood was so high that it would more than offset carfares. But the employers in this instance were not ready to face the issue, and therefore the clearly evasive decision of sixty cents was made.

Another interesting case of suppression occurred in a committee of which I was a member. The question was a disagreement concerning the pay of two stenographers who were working for us. Those who urged the higher amount persisted in speaking of the stenographers' day as an eight-hour day because the hours are from nine to five, although with the hour out for lunch that obviously makes a seven-hour day.

Wherever you have the fight-set, you are in danger of obscurities, conscious or unconscious. As long as trade unionism is a defensive movement, as long as employers' associations are defensive movements, we shall have obscurities. As long as internationalism is what it is, evasion will go on. Of course not to *appear* to evade is part of good diplomacy, for you don't want the other side to think you are trying to "get by" on anything. But we shall continue to evade or suppress as long as our real aim is not agreement, but domination. Lord Shaw, chairman of the Coal Commission, put it as one of the essentials in arbitration that both sides should genuinely desire agreement. Here we get a very direct lesson from psychology. The psychiatrist tells his patient that he cannot help him unless he is honest in wanting his conflict to end. The "uncovering" which every book on psychology has rubbed into us for some years now as a process of the utmost importance for solving the conflicts which the individual has within himself, is equally important for the relations between individuals, or between groups, classes, races, nations. In business, the employer, in dealing either with his associates or his employees, has to get underneath all the camouflage, has to find the real demand as against the demand put forward, distinguish declared motive from

real motive, alleged cause from real cause, and to remember that sometimes the underlying motive is deliberately concealed and that sometimes it exists unconsciously.

The first rule then for obtaining integration is to put your cards on the table, face the real issue, uncover the conflict, bring the whole thing into the open.

One of the most important reasons for bringing the desires of each side to a place where they can be clearly examined and valued is that evaluation often leads to *revaluation*. We progress by a revaluation of desire, but usually we do not stop to examine a desire until another is disputing right of way with it. Watch the evolution of your desires from childhood, through youth, etc. The baby has many infantile desires which are not compatible with his wish for approbation; therefore he revalues his desires. We see this all through our life. We want to do so and so, but we do not estimate how much this really means to us until it comes into conflict with another desire. Revaluation is the flower of comparison.

This conception of the revaluation of desire it is necessary to keep in the foreground of our thinking in dealing with conflict, for neither side ever "gives in" really, it is hopeless to expect it, but there often comes a moment when there is a simultaneous revaluation of interests on both sides and unity precipitates itself. This I think happened in Europe at the London Conference last summer, or rather it happened before that and led to the Conference. Integration is often more a spontaneous flowing together of desire than one might think from what I have said; the revaluing of interests on both sides may lead the interests to fit into each other so that all find some place in the final solution.

The bearing of all this on business administration is, I hope, obvious. A business should be so organized (this is one of the tests for us to apply to our organization) that full opportunity is given in any conflict, in any coming together of different desires, for the whole field of desire to be viewed. Our employees should be able to see, as we should be able ourselves to see, the whole field of desire. The *field of desire* is an important psychological and sociological conception; many conflicts could, I believe, be prevented from ending disastrously by getting the desires of each side into one field of vision where they

could be viewed together and compared. We all believe to a certain extent in Freud's "sublimation," but I believe still more that various desires get orientated toward one another and take on different values in the process of orientation.

It will be understood of course that all this applies to ourselves as well as to the other side; we have to uncover our subarticulate egoisms, and then, when we see them in relation to other facts and desires, we may estimate them differently. We often think it is a question of eliminating motives when it is only a question of subordinating them. We often, for instance, treat personal motives as more ignoble than we need. There is nothing necessarily discreditable in the politician "standing by" his friends. The only ethical question is how much that motive is weighing against others. The unethical thing is to persuade yourself that it is not weighing at all.

I have time barely to mention a very important point: the connection between the *realignment of groups* and a revaluation of interests. I have found this important in watching the realignments of political parties. We must in any conflict between groups watch every realignment to see how far it changes the confronting desires, for this means how far it changes the conflict.

I began this section by saying that the first step in integration is to bring the differences into the open. If the first step is to put clearly before ourselves what there is to integrate, there is something very important for us to note, namely, that the highest lights in a situation are not always those which are most indicative of the real issues involved. Many situations are decidedly complex, involve numerous and varied activities, overlapping activities. There is too great a tendency (perhaps encouraged by popular journalism) to deal with the dramatic moments, forgetting that these are not always the most significant moments. We should not follow literary analogies here. You may have a good curtain with, to quote Kipling, the lovers loving and the parents signing checks. Yet after all, this may not be the controlling moment in the lives of these people. To *find the significant rather than the dramatic features* of industrial controversy, of a disagreement in regard to policy on Board of Directors or between managers, is essential to integrative business policies.

Such search is part of what seems to me the second step in inte-

gration. If the first step is to uncover the real conflict, the next is to take the demands of both sides and break them up into their constituent parts. Contemporary psychology shows how fatal it is to try to deal with conglomerates. I know a boy who wanted a college education. His father died and he had to go to work at once to support his mother. Had he then to give up his desire? No, for on analysis he found that what he wanted was not a college education but an education, and there were still ways of his getting that. You remember the southern girl who said, "Why I always thought damned Yankee was one word until I came north."

This method of *breaking up wholes* is the way you deal with business problems; it is the method which precedes business decisions. Take the case of inaugurating a system of approval shipment. A. W. Shaw, in his *Approach to Business Problems* shows the sub-problems involved here:

1. What will be the effect on collections and on the cost of shipment?
2. What is to be the credit policy?
3. Will the stock in transit or in the hands of customers reduce the number of turnovers per year?
4. Will the risk of damage to returned goods be great enough to jeopardize the regular profit?
5. Will the increase in sales more than offset any added cost in the administrative department?
6. Also psychological factors, as customers' curiosity and caution.

I have given this illustration at length because it seems to me that this is the method which should be applied to controversy. I wish indeed that every controversy might be considered a problem.

You will notice that to break up a problem into its various parts involves the *examination of symbols*, involves, that is, the careful scrutiny of the language used to see what it really means. A friend of mine wanted to go to Europe, but also she did not want to spend the money it would cost. Was there any integration? Yes, she found one. In order to understand it let us use the method I am advocating; let us ask, what did "going to Europe" symbolize to her? In order to do that we have to break up this whole, "going to Europe." What does "going to Europe" stand for to different people? A sea voyage, seeing beautiful places, meeting new people, a rest or change

from daily duties, and a dozen other things. Now this woman had taught for a few years after leaving college and then had gone away and led a somewhat secluded life for a good many years. "Going to Europe" was to her a symbol, not of snow mountains, or cathedrals, or pictures, but of meeting people—that was what she wanted. When she was asked to teach in a summer school of young men and women where she would meet a rather interesting staff of teachers and a rather interesting group of students, she immediately accepted. This was her integration. This was not a substitution for her wish, it was her *real* wish fulfilled.

I have given other illustration of symbols in Chapter IX of my book *Creative Experience*. There was an interesting one in the Loeb-Leopold case a year ago. I think there should have been taken into consideration in that case what life-imprisonment symbolized. As there was no question of freeing the boys, the decision was to be made between death and life imprisonment. Therefore when the latter sentence was given, that was a symbol, it seemed to me, of victory for the boys, especially since everyone thought that their detention would last only a few years. In many cases, on the other hand, life imprisonment is a symbol of defeat. I do not think that this was taken into account sufficiently in considering the effect of the sentence on the country.

It is of course unavoidable to use symbols, all language is symbolic, but we should be always on our guard as to what is symbolized. For instance, the marketing coöperatives say that they want their members to keep their pledges. That statement is a symbol for what they *really* want, which is to get enough of the commodity to control the market. Every day we use many more not-understood symbols, many more whole-words, unanalyzed words, than we ought to. Much of what is written of the "consumer" is inaccurate because consumer is used as a whole-word, whereas it is quite obvious that the consumer of large wealth has different desires and motives from the consumer of small means.

We have been considering the breaking up of the whole-demand. On the other hand, one often has to do just the opposite; find the whole-demand the real demand, which is being obscured by miscellaneous minor claims or by ineffective presentation. The man

with a genius for leadership is the one who can make articulate the whole-demand, unless it is a matter of tactics deliberately to conceal it. I shall not stop to give instances of this, as I wish to have time for some consideration of a point which seems to me very important for business, both in dealings with employees and with competing firms, and that is the anticipation of demands, of difference, of conflict.

Mr. Earl Howard, labor manager for Hart, Schaffner & Marx, said to me once, "It isn't enough merely to study the actual reactions of your employees, you must anticipate their reactions, beat them to it." That—to beat them to it—is exactly what each firm does try to do with its competing firms, but I do not think many managers study and anticipate the reactions of their employees as carefully as they do those of competing firms. It would be just as useful.

You could probably give me many illustrations of the *anticipation of response*. We could find innumerable examples in our households. A man liked motoring, his wife walking; he anticipated what her response might be to a suggestion that they motor on Sunday afternoon by tiring her out playing tennis in the morning.

The middlemen are deliberately anticipating response on the part of the farmers. In their struggle with the marketing coöperatives, they are basing their calculations of the future on the assumption that the particularistic tendency of the farmer is such that he cannot be held in line permanently, that he has been carried off his feet by victory and promises; moreover, that the use of legal power in enforcing contracts will in the end defeat the movement, that the farmer will surely rebel against this sort of coercion.

The anticipation of conflict, it should be noted, does not mean necessarily the avoidance of conflict, but playing the game differently. That is, you integrate the different interests without making all the moves. A friend of mine says that my theory of integration is like a game of chess. I think it is something like that. The tyro has to find his solution by making his actual moves, by the crude method of changing the places of his chessmen. A good chess player does not need to do this, he sees the possibilities without playing them out. The business man in dealing with competitive firms is like the good chess player. As the real conflict between two good chess players is a conflict of possibilities that would be realized if they played them out,

so in business you do not have to make all the moves to make your integrations; you deal with antecedents, premonitory symptoms, etc. You do not avoid doing certain things, you have done them without doing them.

But assuming that in our business we do watch response and anticipate response, that still is not going far enough. It is not enough to ask to what our employee or our business confrère or business competitor is responding, nor even to what he is likely to respond. We have to prepare the way for response, we have to try to build up in him a certain attitude. Of course every good salesman does this, but its necessity is not so fully recognized in other departments, and we shall therefore consider this question further next week.

Yet even *preparation for response* is only a small part of the matter; we shall have to go deeper than that. There is *circular* as well as *linear* response, and the exposition of that is I think the most interesting contribution of contemporary psychology to the social sciences. A good example of circular response is a game of tennis. A serves. The way B returns the ball depends partly on the way it was served to him. A's next play will depend on his own original serve plus the return of B, and so on and so on. We see this in discussion. We see this in most activity between one and another. Mischievous or idle boys say, "Let's start something;" we must remember that whenever we act we have always "started something," behavior precipitates behavior in others. Every employer should remember this. One of the managers in a factory expressed it to me thus: "I am in command of a situation until I behave; when I act I have lost control of the situation." This does not mean that we should not act! It is, however, something to which it is very important that we give full consideration.

Circular response seems a simple matter, quite obvious, something we must all accept. Yet every day we try to evade it, every day we act and hope to avoid the inescapable response. As someone has said, in another connection, "We feed Cerberus raw meat and hope that when we lie between his paws, he will turn out to be a vegetarian."

The conception of circular behavior throws much light on conflict, for I now realize that I can never fight you, I am always fighting you plus me. I have put it this way: that response is always to a relation.

I respond not only to you but to the relation between you and me. Employees do not respond only to their employers but to the relation between themselves and their employer. Trade unionism is responding not only to capitalism but to the relation between itself and capitalism. The Dawes plan, the London Conference, were obviously moments in circular behavior. Circular behavior as the basis of integration gives us the key to constructive conflict.

We have a few moments left to consider the chief *obstacles to integration*. It requires a high order of intelligence, keen perception and discrimination, more than all, a brilliant inventiveness; it is easier for the trade union to fight than to suggest a better way of running the factory. You remember that the Socialist Party in Italy had a majority before Mussolini came in. But they would not take responsibility; they preferred to stay fighting, to attack what others were doing rather than to do themselves. They do not, I think, compare favorably with the English Labor Party.

Another obstacle to integration is that our way of life has habituated many of us to enjoy domination. Integration seems to many a tamer affair; it leaves no "thrills" of conquest. I knew a dispute within a trade union where, by the skilful action of the chairman, a true integration was discovered and accepted, but instead of the satisfaction one might have expected from such a happy result, the evening seemed to end rather dully, flatly; there was no climax, there was no side left swelling its chest, no one had conquered, no one had "won out." It is even true that to some people defeat, as well as conquest, is more interesting than integration. That is, the person with decided fight-habits feels more at home, happier, in the fight-movement. Moreover it leaves the door open for further fighting with the possibility of conquest the next time.

Another obstacle to integration is that the matter in dispute is often theorized over instead of being taken up as a proposed activity. I think this important in business administration. Intellectual agreement does not alone bring full integration. I know one factory which deliberately provides for this by the many activities of its many subcommittees, some of which seem rather trivial unless one sees just how these activities are a contribution to that functional unity which we shall consider in two weeks. I have been interested to watch how

often disagreement disappears when theorizing ends and the question is of some definite activity to be undertaken. At a trade union conference some one brought up the question of waste: how could the workmen help to eliminate waste? But it was found that most of the union men did not think it the job of the workmen to eliminate waste, that belonged to the management. Moreover they did not think it to their interest to eliminate waste; wages were fixed by the union, by collective bargaining; everything saved went to swell profits, no more went into their pockets. It was seen, however, that there was another side, and the argument went on, but without coming to any agreement. Finally, however, by some manoeuvring on the part of the chairman, it was acknowledged that there were certain forms of waste which the unions could be got to take cognizance of. A machinist, a plumber and a carpenter undertook to take up with their unions the question of how far they could agree to take some responsibility for these particular types of waste. I hope the fact then emerged, when it was considered as a practical issue, that for some forms of waste the management is responsible, for some forms the employees, and for some forms the union.

A serious obstacle to integration which every business man should consider is the language used. We have noted the necessity of making preparation in the other man, and in ourselves too, for the attitude most favorable to reconciliation. A trade unionist said to me, "Our representatives didn't manage it right. If instead of a 15 per cent increase they had asked for an adjustment of wages, the management would have been more willing to listen to us; it would have put them in a different frame of mind." I don't quite see why we are not more careful about our language in business, for in most delicate situations we quite consciously choose that which will not arouse antagonism. You say to your wife at breakfast, "Let's reconsider that decision we came to last night." You do not say, "I wish to give you my criticism of the decision you made last night."

I cannot refrain from mentioning a personal experience. I went into the Edison Electric Light Company and said to a young woman at a counter, "Where shall I go to speak about my bill?" "Room D for complaints," she replied. "But I don't wish to make a complaint," I said. "I thought there was a mistake in your bill." "I think there

is," I said, "but I don't wish to complain about it; it was a very natural mistake." The girl looked nonplussed, and as she was obviously speechless a man came out from behind a desk and said: "You would prefer to ask for an adjustment, wouldn't you?" and we had a chat about it.

I think that the "grievance committees" which exist in most factories are a mistake. I do not like the "trouble specialists" of the Ford plant. I wish it were not so often stated that shop or department committees were formed to "settle disputes." If you will get lists of these so-called "disputes," you will find that often they have not so much of the fight element in them as this word implies. But much of the language expressing the relation between capital and labor is that of a fight: "traditional enemies," the "weapon of the union," etc.

I have left untouched one of the chief obstacles to integration, namely, the undue influence of leaders—the manipulation of the unscrupulous on the one hand and the suggestibility of the crowd on the other. Moreover, even when the power of suggestion is not used deliberately, it exists in all meetings between people; the whole emotional field of human intercourse has to be taken fully into account in dealing with methods of reconciliation. I am deliberately omitting the consideration of this, not because I do not feel its importance as keenly as anyone, but because in these few evenings we have not time for everything.

Finally, perhaps the greatest of all obstacles to integration is our lack of training for it. In our college debates we try always to beat the other side. In the circular announcing the courses to be given at the Bryn Mawr Summer School for Workers, I find: "English Composition and Public Speaking; to develop the art of oral and written expression." I think that in addition to this there should be classes in discussion which should aim to teach the "art" of coöperative thinking, and I was disappointed that there was no such course in the program of a school for workers. Managers need it just as much. I have found in the case of the Wage Boards which I have been on, that many employers (I ought in fairness to say not the majority) came to these joint conferences of employers and employees with little notion of conferring, but to push through, to force through,

plans *previously* arrived at, based on *preconceived* ideas of what employees are like. It seems as if the methods of genuine conference have yet to be learned. Even if there were not the barriers of an unenlightened self interest, of prejudice, rigidity, dogmatism, routine, there would still be required training and practice for us to master the technique of integration. A friend of mine said to me, "Open-mindedness is the whole thing, isn't it?" No, it isn't, it needs just as great a respect for your own view as for that of others, and a firm upholding of it until you are convinced. Mushy people are no more good at this than stubborn people.

As an indirect summing up of this evening's talk, I should like to emphasize our responsibility for integration. We saw in our consideration of circular response that my behavior helps create the situation to which I am responding. That implies (what we have daily to take into account) that my behavior is helping to *develop* the situation to which I am responding. The standard of living goes up not only while but partly because it is being studied. This conception of the developing situation is of the utmost importance for business administration. It makes it impossible to construct a map of the future, yet all our maxims of foresight hold good; every business should reconcile these two statements. We should work always with the evolving situation, and note what part our own activities have in that evolving situation.

This is the most important word not only for business relations but for all human relations: not to adapt ourselves to a situation—we are all more necessary to the world than that; neither to mould a situation to *our* liking—we are all, or rather each, of too little importance to the world for that; but to take account of that reciprocal adjustment, that interactive behavior between the situation and ourselves which means a change in both the situation and ourselves. One test of business administration should be: is the organization such that both employers and employees, or co-managers, co-directors, are stimulated to a reciprocal activity which will give more than mere adjustment, more than an equilibrium? Our outlook is narrowed, our activity is restricted, our chances of business success largely diminished when our thinking is constrained within the limits of what has been called an either-or situation. We should never allow ourselves

to be bullied by an "either-or." There is often the possibility of something better than either of two given alternatives. Every one of us interested in any form of constructive work is looking for the plus values of our activity. Two weeks from tonight, under the heading of *Business as an Integrative Unity*, we shall consider how we can find in business administration those plus values which alone mean progress, progress for the individual and for whatever business or service we have undertaken for ourselves and for our community.

X

THE PSYCHOLOGICAL FOUNDATIONS: THE GIVING OF ORDERS

By M. P. Follett

The chief thing I have to say to you this month is that I wish we could all take a responsible attitude toward our experience—a conscious and responsible attitude. Let us take one of the many activities of the business man, and see what it would mean to take a responsible attitude toward our experience in regard to that one thing. I am going to take the question of giving orders: what are the principles underlying the different ways of giving orders, which of these principles have you decided to follow? Most people have not decided, have not even thought out what the different principles are. Yet we all give orders every day. Surely this is a pity. To know what principles may underlie any given activity of ours is to take a conscious attitude toward our experience. The second step is to take a responsible attitude, by deciding, after we have recognized the different principles, which ones we will follow. In the matter of giving orders, I wish we might all of us decide now, if we have not already done so, on the way we think orders should be given. We shall not arrive at the same conclusions, there may be a good deal of difference of opinion among us. What I urge is not that you adopt my principles, but that you stop to think what principles you are acting on or what principles you intend to act on in this matter, and then try giving orders in accordance with those principles as far as the methods of your firm permit. And next I urge you to note results; for our first decision should be tentative. We should try experiments and note whether they succeed or fail and, most important of all, why they succeed or fail. This is taking an experimental attitude toward experience. We have then three steps: (1) a conscious attitude—realize the principles which it is possible to act on in this matter;

(2) a responsible attitude— decide which we will act on; (3) an experimental attitude—try experiments and watch results. We might add a fourth step: pool our results.

In doing all this we should observe carefully what opportunities the methods of our particular firm afford for giving orders in the way we have decided provisionally is best, and come to some conclusion as to how far and in what way those methods would have to be changed if our principles were adopted. This will increase our consciousness in the matter.

To some men the matter of giving orders seems a very simple affair; they expect to issue their orders and have them obeyed without question. Yet, on the other hand, the shrewd common sense of many a business executive has shown him that the issuing of orders is surrounded by many difficulties; that to demand an unquestioning obedience to orders not approved, not perhaps even understood, is bad business policy. Moreover, psychology, as well as our own observation, shows us not only that you cannot get people to do things most satisfactorily by ordering them or exhorting them; but also that even reasoning with them, even convincing them intellectually, may not be enough. Even the "consent of the governed" will not do all the work it is supposed to do, an important consideration for those who are advocating employee representation. For all our past life, our early training, our later experience, all our emotions, beliefs, prejudices, every desire that we have, have formed certain habits of mind, what the psychologists call habit-patterns, action-patterns, motor-sets. Therefore it will do little good merely to get intellectual agreement; unless you change the habit-patterns of people, you have not really changed your people. Business administration, industrial organization, should build up certain habit-patterns, that is, certain mental attitudes. For instance, the farmer has a general disposition to "go it alone," and this is being changed by the activities of the coöperatives, that is, note, *by the farmer's own activities*. So the workman has often a general disposition of antagonism to his employers which cannot be changed by argument or exhortation, but only through certain activities which will create a different disposition. One of my trade union friends told me that he remembered when he was a quite small boy hearing his father, who worked in a shoe-shop, rail-

ing daily against his boss. So he grew up believing that it was inherent in the nature of things that the workman should be against his employer. I know many working men who have a prejudice against getting college men into factories. You could all give me examples of attitudes among your employees which you would like to change. We want, for instance, to create an attitude of respect for expert opinion.

If we analyze this matter a little further we shall see that we have to do three things, I am now going to use psychological language: (1) build up certain attitudes; (2) provide for the release of these attitudes; (3) augment the released response as it is being carried out. What does this mean in the language of business? A psychologist has given us the example of the salesman. The salesman first creates in you the attitude that you want his article; then, at just the "psychological" moment, he produces his contract blank which you may sign and thus release that attitude; then if, as you are preparing to sign, some one comes in and tells you how pleased he has been with his purchase of this article, that augments the response which is being released.

If we apply this to the subject of orders and obedience, we see that people can obey an order only if previous habit-patterns are appealed to or new ones created. When the employer is considering an order, he should also be thinking of the way to form the habits which will ensure its being carried out. We should first lead the salesmen selling shoes or the bank clerk cashing checks to see the desirability of a different method. Then the rules of the store or bank should be so changed as to make it possible for salesman or cashier to adopt the new method. In the third place they could be made more ready to follow the new method by convincing in advance some one individual who will set an example to the others. You can usually convince one or two or three ahead of the rank and file. This last step you all know from your experience to be good tactics; it is what the psychologists call intensifying the attitude to be released. But we find that the released attitude is not by one release fixed as a habit; it takes a good many responses to do that. This is an important consideration for us, for from one point of view business success depends largely on this, namely, whether our business is so organized and administered

that it tends to form certain habits, certain mental attitudes. It has been hard for many old-fashioned employers to understand that *orders will not take the place of training.* I want to italicize that. Many a time an employer has been angry because, as he expressed it, a workman "wouldn't" do so and so, when the truth of the matter was that the workman couldn't, actually couldn't, do as ordered because he could not go contrary to life-long habits. This whole subject might be taken up under the heading of education, for there we could give many instances of the attempt to make arbitrary authority take the place of training. In history, the aftermath of all revolutions shows us the results of the lack of training.

In this matter of prepared-in-advance behavior patterns, that is, in preparing the way for the reception of orders, psychology makes a contribution when it points out that the same words often rouse in us a quite different response when heard in certain places and on certain occasions. A boy may respond differently to the same suggestion when made by his teacher and when made by his schoolmate. Moreover, he may respond differently to the same suggestion made by the teacher in the schoolroom and made by the teacher when they are taking a walk together. Applying this to the giving of orders, we see that the place in which orders are given, the circumstances under which they are given, may make all the difference in the world as to the response which we get. Hand them down a long way from President or Works Manager and the effect is weakened. One might say that the strength of favorable response to an order is in inverse ratio to the distance the order travels. Production efficiency is always in danger of being affected whenever the long-distance order is substituted for the face-to-face suggestion. There is, however, another reason for that which I shall consider in a moment.

All that we said last week of integration and circular behavior applies directly to the anticipation of response in giving orders. We spoke then of what the psychologists call linear and circular behavior. Linear behavior would be, to quote from Dr. Cabot's review of my book, *Creative Experience*, when an order is accepted as passively as the woodshed accepts the wood. In circular behavior you get a "come-back." But we all know that we get the come-back every day of our life, and we must certainly allow for it, or for what is

more elegantly called circular behavior, in the giving of orders. Following out the thought of last week, I should say that the giving of orders and the receiving of orders ought to be a matter of integration through circular behavior, and that we should seek methods to bring this about. The rest of the hour could profitably be spent on this point, with further explanation and with illustration, but I am trying to cover a good deal of ground in these talks by making suggestions for you to expand for yourselves.

Psychology has another important contribution to make on this subject of issuing orders or giving directions: before the integration can be made between order-giver and order-receiver, there is often an integration to be made within one or both of the individuals concerned. There are often two dissociated paths in the individual; if you are clever enough to recognize these you can sometimes forestall a Freudian conflict, make the integration appear before there is an acute stage. To explain what I mean, let me run over briefly a social worker's case. The girl's parents had been divorced and the girl placed with a jolly, easy going, slack and untidy family, consisting of the father and mother and eleven children, sons and daughters. Gracie was very happy here, but when the social worker in charge of the case found that the living conditions involved a good deal of promiscuity, she thought the girl should be placed elsewhere. She therefore took her to call on an aunt who had a home with some refinement of living, where they had "high tastes," as one of the family said. This aunt wished to have Gracie live with her, and Gracie decided that she would like to do so. The social worker, however, in order to test her, said, "But I thought you were so happy where you are." "Can't I be happy and high, too?" the girl replied. There were two wishes here, you see. The social worker by removing the girl to the aunt may have forestalled a Freudian conflict, the dissociated paths may have been united. I do not know the outcome of this story, but it indicates a method of dealing with our co-directors—make them "happy and high, too."

Business administration has often to consider how to deal with the dissociated paths in individuals or groups, but the methods of doing this successfully have been developed much further in some departments than in others. We have as yet hardly recognized this

as part of the technique of dealing with employees, yet the clever salesman knows that it is the chief part of his job. The prospective buyer wants the article and does not want it. The able salesman does not suppress the arguments in the mind of the purchaser against buying, for then the purchaser might be sorry afterwards for his purchase, and that would not be good salesmanship. Unless he can unite, integrate, in the purchaser's mind, the reasons for buying and the reasons for not buying, his future sales will be imperilled, he will not be the highest grade salesman.

Please note that this goes beyond what the psychologist whom I quoted at the beginning of this section told us. He said, "The salesman must create in you the attitude that you want his article." Yes, but only if he creates this attitude by integration not by suppression.

Apply all this to orders. An order often leaves the individual to whom it is given with two dissociated paths; an order should seek to unite, to integrate, dissociated paths. Court decisions often settle arbitrarily which of two ways is to be followed without showing a possible integration of the two, that is, the individual is often left with an internal conflict on his hands. This is what both courts and business administration should try to prevent, the internal conflicts of individuals or groups.

In discussing the preparation for giving orders, I have not spoken at all of the appeal to certain instincts made so important by many writers. Some writers, for instance, emphasize the instinct of self-assertion; this would be violated by too rigid orders or too clumsily-exercised authority. Other writers, of equal standing, tell us that there is an instinct of submission to authority. I cannot discuss this for we should first have to define instincts, too long an undertaking for us now. Moreover, the exaggerated interest in instincts of recent years, an interest which in many cases has received rather crude expression, is now subsiding. Or rather, it is being replaced by the more fruitful interest in habits.

There is much more that we could learn from psychology about the forming of habits and the preparation for giving orders than I can even hint at now. But there is one point, already spoken of by implication, that I wish to consider more explicitly, namely, the manner of giving orders. Probably more industrial trouble has been

caused by the manner in which orders are given than in any other way. In the *Report on Strikes and Lockouts*, a British Government Publication, the cause of a number of strikes is given as "alleged harassing conduct of the foreman," "alleged tyrannical conduct of an under-foreman," "alleged overbearing conduct of officials." The explicit statement, however, of the tyranny of superior officers as the direct cause of strikes is I should say, unusual, yet resentment smolders and breaks out in other issues. And the demand for better treatment is often explicit enough. We find it made by the metal and wood-working trades in an aircraft factory, who declared that any treatment of men without regard to their feelings of self-respect would be answered by a stoppage of work. We find it put in certain agreements with employers that "the men must be treated with proper respect, and threats and abusive language must not be used."

What happens to a man, *in* a man, when an order is given in a disagreeable manner, by foreman, head of department, his immediate superior in store, bank or factory? The man addressed feels that his self-respect is attacked, that one of his most inner sanctuaries is invaded. He loses his temper or becomes sullen or is on the defensive; he begins thinking of his "rights"—a fatal attitude for any of us. In the language we have been using, the wrong behavior pattern is aroused, the wrong motor-set; that is, he is now "set" to act in a way which is not going to benefit the enterprise in which he is engaged.

There is a more subtle psychological point here too; the more you are "bossed" the more your activity of thought will take place within the bossing-pattern, and your part in that pattern seems usually to be opposition to the bossing.

(I want to ask you in the discussion period, in connection with this point of the manner of giving orders, what your experience has been with the instruction card of the Taylor system. My own experience with printed directions seems to have been different from that of the scientific managers and I want to know why.)

This complaint of the abusive language and the tyrannical treatment of the one just above the worker is an old story to us all, but there is an opposite extreme which is far too little considered. The immediate superior officer is often so close to the worker that he does not exercise the proper duties of his position. Far from taking on him-

self an aggressive authority, he has often evaded one of the chief problems of his job: how to do what is implied in the fact that he has been put in a position over others. The head of the woman's cloak department in a store will call out, "Say, Sadie, you're 36 aren't you? There's a woman down in the Back Bay kicking about something she says you promised yesterday." "Well, I like that," says Sadie, "some of those Back Bay women would kick in heaven." And that perhaps is about all that happens. Of course, the Back Bay lady has to be appeased, but there is often no study of what has taken place for the benefit of the store. I do not mean that a lack of connection between such incidents and the improvement of store technique is universal, but it certainly exists far too often and is one of the problems of those officials who are just above the heads of departments. Naturally a woman does not want to get on bad terms with her fellow-employees with whom she talks and works all day long. Consider the chief operator of the telephone exchanges, remembering that the chief operator is a member of the union, and that the manager is not.

Now what is our problem here? How can we avoid the two extremes: too great bossism in giving orders, and practically no orders given? I am going to ask how *you* are avoiding these extremes. My solution is to depersonalize the giving of orders, to unite all concerned in a study of the situation, to discover the law of the situation and obey that. Until we do this I do not think we shall have the most successful business administration. This is what does take place, what has to take place, when there is a question between two men in positions of equal authority. The head of the sales departments does not give orders to the head of the production department, or vice versa. Each studies the market and the final decision is made as the market demands. This is, ideally, what should take place between foremen and rank and file, between any head and his subordinates. One *person* should not give orders to another *person*, but both should agree to take their orders from the situation. If orders are simply part of the situation, the question of some one giving and some one receiving does not come up. Both accept the orders given by the situation. Employers accept the orders given by the situation; employees accept the orders given by the situation. This gives, does it not? a slightly

different aspect to the whole of business administration through the entire plant.

We have here, I think, one of the largest contributions of scientific management: it tends to depersonalize orders. From one point of view one might call the essence of scientific management the attempt to find the law of the situation. With scientific management the managers are as much under orders as the workers, for both obey the law of the situation. Our job is not how to get people to obey orders, but how to devise methods by which we can best *discover* the order integral to a particular situation. When that is found, the employee can issue it to the employer, as well as employer to employee. This often happens easily and naturally. My cook or my stenographer points out the law of the situation, and I, if I recognize it as such, accept it, even although it may reverse some "order" I have given.

If those in supervisory positions should depersonalize orders, then there would be no overbearing authority on the one hand, nor on the other that dangerous *laissez-aller* which comes from the fear of exercising authority. Of course we should exercise authority, but always the authority of the situation. I do not say that we have found the way to a frictionless existence, far from it, but we now understand the place which we mean to give to friction. We intend to set it to work for us as the engineer does when he puts the belt over the pulley. There will be just as much, probably more, room for disagreement in the method I am advocating. The situation will often be seen differently, often be interpreted differently. But we shall know what to do with it, we shall have found a method of dealing with it.

I call it depersonalizing because there is not time to go any further into the matter. I think it really is a matter of *repersonalizing*. We, persons, have relations with each other, but we should find them in and through the whole situation. We cannot have any sound relations with each other as long as we take them out of that setting which gives them their meaning and value. This divorcing of persons and the situation does a great deal of harm. I have just said that scientific management depersonalizes; the deeper philosophy of scientific management shows us personal relations within the whole setting of that thing of which they are a part.

There is much psychology, modern psychology particularly, which

tends to divorce person and situation. What I am referring to is the present zest for "personality studies." When some difficulty arises we often hear the psychologist whose specialty is personality studies say, "Study the psychology of that man." And this is very good advice, but only if at the same time we study the entire situation. To leave out the whole situation, however, is so common a blunder in the studies of these psychologists that it constitutes a serious weakness in their work. And as those of you who are personnel directors have more to do, I suppose, with those psychologists who have taken personality for their specialty than with any others, I wish you would watch and see how often you find that this limitation detracts from the value of their conclusions.

I said above that we should substitute for the long-distance order the face-to-face suggestion. I think we can now see a more cogent reason for this than the one then given. It is not the face-to-face suggestion that we want so much as the joint study of the problem, and such joint study can be made best by the employee and his immediate superior, or employee and special expert on that question.

I began this evening by emphasizing the advisability of preparing in advance the attitude necessary for the carrying out of orders, as on our first evening together we considered preparing the attitude for integration, but we have now, in our consideration of the joint study of situations, in our emphasis on obeying the law of the situation, perhaps got a little beyond that, or rather we have now to consider in what sense we wish to take the psychologist's doctrine of prepared-in-advance attitudes. By itself this would not take us far, for everyone is studying psychology nowadays, and our employees are going to be just as active in preparing us as we in preparing them! Indeed, a girl working in a factory said to me, "We had a course in psychology last winter, and I see now that you have to be pretty careful how you put things to the managers if you want them to consider favorably what you're asking for." If this prepared-in-advance idea were all that the psychologists think it, it would have to be printed privately as secret doctrine. But the truth in that the best preparation for integration in the matter of orders or in anything else, is a joint study of the situation. We should not try to create the attitude *we want*, although that is the usual phrase, but the attitude required

for coöperative study and decision. This holds good even for the salesman. We said above that when the salesman is told that he should create in the prospective buyer the attitude that he wants the article, he ought also to be told that he should do this by integration rather than by suppression. We have now a hint of *how* he is to attain this integration.

I spoke last week of the importance of changing some of the language of business personnel relations. We considered whether the words "grievances," "complaints," or Ford's "trouble specialists" did not arouse the wrong behavior-patterns. I think "order" certainly does. If that word is not to mean any longer external authority, arbitrary authority, but the law of the situation, then we need a new word for it. It is often the order that people resent as much as the thing ordered. People do not like to be ordered even to take a holiday. I have often seen instances of this. The wish to govern one's own life is of course one of the most fundamental feelings in every human being. To call this "the instinct of self-assertion," "the instinct of initiative," does not express it wholly. I think it is told in the life of some famous American that when he was a boy and his mother said, "Go get a pail of water," he always replied, "I won't," before taking up the pail and fetching the water. This is significant; he resented the command, the command of a person; but he went and got the water, not, I believe, because he had to, but because he recognized the demand of the situation. *That*, he knew he had to obey; *that*, he was willing to obey. And this kind of obedience is not opposed to the wish to govern one's self, but each is involved in the other; both are part of the same fundamental urge at the root of one's being. We have here something far more profound than "the egoistic impulse" or "the instinct of self-assertion." We have the very essence of the human being.

This subject of orders has led us into the heart of the whole question of authority and consent. When we conceive of authority and consent as parts of an inclusive situation, does that not throw a flood of light on this question? The point of view here presented gets rid of several dilemmas which have seemed to puzzle people in dealing with consent. The feeling of being "under" someone, of "subordination," of "servility," of being "at the will of

another," comes out again and again in the Shop Stewards movement and in the testimony before the Coal Commission. One man said before the Coal Commission, "It is all right to work *with* anyone; what is disagreeable is to feel too distinctly that you are working *under* anyone." *With* is a pretty good preposition, not because it connotes democracy, but because it connotes functional unity,[1] a much more profound conception than that of democracy as usually held. The study of the situation involves the *with* preposition. Then Sadie is not left alone by the head of the cloak department, nor does she have to obey her. The head of the department says, "Let's see how such cases had better be handled, then we'll abide by that." Sadie is not under the head of the department, but both are *under* the situation.

Twice I have had a servant applying for a place ask me if she would be treated as a menial. When the first woman asked me that, I had no idea what she meant, I thought perhaps she did not want to do the roughest work, but later I came to the conclusion that to be treated as a menial meant to be obliged to be under some one, to follow orders without using one's own judgment. If we believe that what heightens self-respect increases efficiency, we shall be on our guard here.

Very closely connected with this is the matter of pride in one's work. If an order goes against what the craftsman or the clerk thinks is the way of doing his work which will bring the best results, he is justified in not wishing to obey that order. Could not that difficulty be met by a joint study of the situation? It is said that it is characteristic of the British workman to feel, "I know my job and won't be told how." The peculiarities of the British workman might be met by a joint study of the situation, it being understood that he probably has more to contribute to that study than anyone else.

(I should like to say incidentally here, that what I am talking about when I say joint study is entirely different from what is being advocated in England, and tried out in mine and factory, as "the independent investigation of the worker," "independent workers' control." I think they are on quite the wrong track in this matter, and this I shall try to show next week.)

[1] If it is understood as indicating an interweaving, not mere addition.

There is another dilemma which has to be met by everyone who is in what is called a position of authority: how can you expect people merely to obey orders and at the same time to take that degree of responsibility which they should take? Indeed, in my experience, the people who enjoy following orders blindly, without any thought on their own part, are those who like thus to get rid of responsibility. But the taking of responsibility, each according to his capacity, each according to his function in the whole (all that we shall take up next week under the title of *Business as an Integrative Unity*), this taking of responsibility is usually the most vital matter in the life of every human being, just as the allotting of responsibility is the most important part of business administration.

A young trade unionist said to me, "How much dignity can I have as a mere employee?" He can have all the dignity in the world if he is allowed to make his fullest contribution to the plant *and to assume definitely the responsibility therefor.*

I think one of the gravest problems before us is how to make the reconciliation between receiving orders and taking responsibility. And I think the reconciliation can be made through our conception of the law of the situation.

I have spoken of several dilemmas: how to take orders and yet not to be "under" someone, how to take orders and yet to keep one's pride in one's work, how to take orders and yet to have a share in responsibility. There is still another dilemma troubling many people which our present point of view helps to solve, namely, whether you can have obedience *and* liberty. That group of political scientists and guild socialists who are denying the power of the state, say that we cannot have obedience *and* liberty. I think they are wholly wrong, but I think we should ask ourselves to what we owe obedience. Surely only to a functional unity of which we are a part, to which we are contributing. I agree with the guild socialists that the state is not that now. Those who are concerned with the reorganization of industry should take warning from the failures of the state.

Myers, author of *Representative Government in Industry*, comes near involving himself in this dilemma of the political scientists when he tells us that men in industry have so long merely obeyed orders that we have there a real social danger. He says, "We must reawaken

the instinct of self-assertion." While I think Myers recognizes a real problem here, I certainly do not think that the instinct of self-assertion needs to be reawakened in many of us.

We considered the subject of symbols last week. It is often very apparent that an order is a symbol. The referee in the game stands watch in hand, and says, "Go." It is an order, but order only as symbol. I may say to an employee, "Do so and so," but I should say it only because we have both agreed, openly or tacitly, that that which I am ordering done is the best thing to be done. The order is then a symbol. And if it is a philosophical and psychological truth that we owe obedience only to a functional unity to which we are contributing, we should remember that a more accurate way of stating that would be to say that our obligation is to a unify*ing*, to a process.

This brings us now to one of our most serious problems in this matter of orders. It is important, but we can touch on it only briefly; it is what we spoke of last week as the evolving situation. I am trying to show tonight that the order must be integral to the situation and must be recognized as such. But we saw last week that the situation was always developing. If the situation is never stationary, then the order should never be stationary so to speak; how to prevent it from being so is our problem. The situation is changing while orders are being carried out, because, by and through orders being carried out. How is the order to keep up with the situation? External orders never can, only those drawn fresh from the situation.

Moreover, if taking a *responsible* attitude toward experience involves recognizing the evolving situation, a *conscious* attitude toward experience means that we note the change which the developing situation makes in ourselves; the situation does not change without changing us.

To summarize, what have we learned from last week and this on the subject of the giving of orders? That, integration being the basic law of life, orders should be the composite conclusion of those who give and those who receive them; more than this, that they should be the integration of the people concerned and the situation; more even than this, that they should be the integrations involved in the evolving situation. If you accept my three fundamental statements on this subject: (1) that the order should be the law of the situation; (2) that

the situation is always evolving; (3) that orders should involve circular not linear behavior—then we see that our old conception of orders has somewhat changed, and that there should therefore follow definite changes in business practice.

There is a problem so closely connected with the giving of orders that I want to put it before you for future discussion. After we have decided on our orders, we have to consider how much and what kind of supervision is necessary or advisable in order that they shall be carried out. We all know that many workers object to being watched. What does that mean, how far is it justifiable? How can the objectionable element be avoided and at the same time necessary supervision given? I do not think that this matter has been studied sufficiently. When I asked a very intelligent girl what she thought would be the result of profit-sharing and employee representation in the factory where she worked, she replied joyfully, "We shan't need foremen any more." While her entire ignoring of the fact that the foreman has other duties than keeping workers on their jobs was amusing, one wants to go beyond one's amusement and find out what this objection to being watched really means.

In a case in Scotland arising under the Minimum Wage Act, the overman was called in to testify whether or not a certain workman did his work properly. The examination was as follows:

Magistrate: "But isn't it your duty under the Mines Act to visit each working place twice a day?"

Overman: "Yes."

Magistrate: "Don't you do it?"

Overman: "Yes."

Magistrate: "Then why didn't you ever see him work?"

Overman: "They always stop work when they see an overman coming and sit down and wait till he's gone—even take out their pipes, if it's a mine free from gas. They won't let anyone watch them."

An equally extreme standard was enforced for a part of the war period at a Clyde engineering works. The chairman of shop stewards was told one morning that there was a grievance at the smithy. He found one of the blacksmiths in a rage because the managing director

in his ordinary morning's walk through the works had stopped for five minutes or so and watched this man's fire. After a shop meeting the chairman took up a deputation to the director and secured the promise that this should not happen again. At the next works meeting the chairman reported the incident to the body of workers with the result that a similar demand was made throughout the works and practically acceded to, so that the director hardly dared to stop at all in his morning's walk.

I have seen similar instances cited. Many workmen feel that being watched is unbearable. What can we do about it? How can we get proper supervision without this watching which a worker resents? Supervision is necessary; supervision is resented,—how are we going to make the integration there? Some say, "Let the workers elect the supervisors." I do not believe in that. Do you? Let us discuss this next week.

There are three other points closely connected with the subject of the evening which I should like merely to point out. First, when and how do you point out mistakes, misconduct? One principle can surely guide us here: don't blame for the sake of blaming, make what you have to say accomplish something; say it in that form, at that time, under those circumstances, which will make it a real education to your subordinate. Secondly, since it is recognized that the one who gives the orders is not as a rule a very popular person, the management sometimes tries to offset this by allowing the person who has this onus upon him to give any pleasant news to the workers, to have the credit of any innovation which the workers very much desire. One manager told me that he always tried to do this. I suppose that this is good behavioristic psychology, and yet I am not sure that it is a method I wholly like. It is quite different, however, in the case of a mistaken order having been given; then I think the one who made the mistake should certainly be the one to rectify it, not as a matter of strategy, but because it is better for him too. It is better for all of us not only to acknowledge our mistakes, but to do something about them. If a foreman discharges someone and it is decided to reinstate the man, it is obviously not only good tactics but a square deal to the foreman to allow him to do the reinstating.

There is of course a great deal more to this matter of giving orders

than we have been able to touch on; far from exhausting the subject, I feel that I have only given hints. I have been told that the artillery men suffered more mentally in the war than others, and the reason assigned for this was that their work was directed from a distance. The combination of numbers by which they focussed their fire was telephoned to them. The result was also at a distance. Their activity was not closely enough connected with the actual situation at either end.

One matter in regard to giving orders which seems to me of the utmost importance for business administration, I wish you would enlighten me about. When the numbers of employees are so large and so widely scattered as in the case of the Elevated and Telephone employees, how should the orders be conveyed? Someone said to me one day, "How do you suppose the Elevated gives its orders?" I didn't know what she meant and asked her, and she replied, "The uniform courtesy of the Elevated employees is such that I often wonder how the people at the top get their wishes across to so many widely scattered people."

Our time is more than up, but let me, in order to indicate the scope of this subject, mention some of the things we have not touched on, or not adequately: the relation of orders to training; the effect of the emotions (hope, fear, etc.) in the obeying of orders; how to keep control and yet give control and responsibility to subordinates. Moreover, perhaps I have not said explicitly that the participation of employees in the planning of orders should take place before the order is given, not afterwards. After the order has been given the subordinate must obey. I certainly believe in authority—of the right kind. And I am sure that I have not emphasized sufficiently the careful, painstaking study that is necessary if we are to anticipate how orders will be received. A man grumbles at an order; this makes trouble and the one over him says: "Why is that man kicking"? and he begins to study the situation. But perhaps by that time it is too late, the trouble has perhaps got too much headway. To anticipate the kicks, to learn the most successful methods of doing this, is an important part of the work of the order-giver.

I began this talk by saying that I was going to consider order-giving merely as an illustration of a method, the method of taking a con-

scious and responsible attitude toward our experience. I feel strongly on this point, on the necessity of taking a responsible attitude toward our experience. We students of social and industrial research are often lamentably vague. We sometimes do not even know what we know and what we do not know. We can avoid this vagueness only (1) by becoming conscious of what we believe in, (2) of what we do not believe in, and (3) by recognizing the large debatable ground in between those two fields and trying our experiments there. Don't let us try experiments where they are not needed, in regard to matters about which we have already made up our minds. For instance, there are certain things which people continue to urge about employee representation which are almost universally accepted. There is no need of saying these particular things any longer, there is no need of studying them, let us give our efforts to the things we don't know—there are plenty of them! Another point,—we should always know whether we are considering principles or methods. A confusion here is disastrous, as we often see in discussion. I have heard a discussion on whether shop-committee meetings should be held in company time, which seemed to me quite beside the mark because the distinction was not being made between the principles underlying the matter and the possible methods of carrying out the principles. Some were talking about one, and some about the other. Moreover, let us not confuse our methods one with the other; let us try out one until we have come to some conclusion about it. As a coach used to tell the Harvard boat crew, "It's better to have a method and stick to it, even if it's not the best possible method."

This is all involved in what I spoke of as taking a conscious and responsible attitude toward experience. It is also taking a scientific attitude. The growing appreciation of the advantage of such an attitude is evidenced by the subject chosen for this course of conferences: *the scientific foundations of business administration.*

XI

THE PSYCHOLOGICAL FOUNDATIONS: BUSINESS AS AN INTEGRATIVE UNITY

By M. P. Follett

A man said to me once, a man working on a salary as the head of a department in a factory, "I'm no wage-earner, working so many hours a day; if I wake up at midnight and have an idea that might benefit the factory, it belongs to the factory." His implication was that the wage-earner would not feel this. Can business reach its maximum of efficiency and service unless it is so organized that the wage-earner does feel this?

But the subject we are considering tonight, that of integrative unity, goes far beyond the question of the worker's place in industry. It seems to me that the first test of business administration, of industrial organization, should be whether you have a business with all its parts so coördinated, so moving together in their closely knit and adjusting activities, so linking, interlocking, interrelating, that they make a working *unit*, that is, not a congeries of separate pieces but what I have called a functional whole or integrative unity. I have taken these phrases from Kempf, the psychobiologist. They seem to me to represent one of the most profound of philosophical and psychological principles, and one which helps us very materially in working out practical methods of business organization. For this principle applies to the relation of men, the relation of services, the relation of departments, the last of which I have found one of the weakest points in the businesses which I have studied. How are we to get an integrative unity? How are we to know when we have it? What tests are there which will show us when we are approaching it?

I once asked a girl who worked in a factory where profit-sharing had been introduced, what difference it had made in her attitude, and she replied: "We have a garden in the factory grounds and of course

I never used to pick any of the flowers, they didn't belong to me; but since I've felt myself a partner, I go in and pick the pansies." Remembering the Peter Piper of my nursery days I said: "If all the partners picked the pansies, where would the pansies be for the partners to pick?"

What then does an integrative unity mean, if it does not mean picking the pansies or taking a free ride on the railroad because I am a stockholder? Does employee representation give us the kind of unity we are seeking? This has seldom been even the aim of employee representation. To many the introduction of Works Councils, of Shop Committees, has meant merely changing the field of collective bargaining. Mr. Stoddard says in his book on *The Shop Committee*, "Collective bargaining is the fundamental theory on which the shop committee rests." And he says it approvingly. We see the same thing stated again and again. I do not think we are going greatly to strengthen business and industrial organization by this conception. It seems to me that the aim of employee representation should be not merely to transfer the antagonism of "sides" to a different field, but to see how far sides, that is controversial sides, can be done away with. Collective bargaining seems only a temporary expedient, for it has no real vitality as it does not create. It fixes the limits of wages, hours and conditions; it might be conceived perhaps as fixing certain limits to policies, but it does not create. It is on an entirely different principle that the policies of our great businesses are brought into being and operation. Collective bargaining will go on, I hope, until we have found something better, but I believe that something better will be found, is being found.[1]

Capital and labor must fight or unite. No gentlemanly name for fighting will change the essential nature of the relation between capital and labor in those plants where "sides" are sharply defined. Yet we must remember how strenuously the unions have opposed any

[1] The term "bargaining" has come to be used pretty generally for all agreements between management and labor, yet some of these agreements are arrived at by a much more fruitful process than that of bargaining. I am not, when looking beyond "collective bargaining," thinking of these agreements, but of that bargaining which rests wholly on the balance of power and ends with compromise.

blurring of the lines dividing management and workmen. Measures which aimed at greater unity of employers and employees have been denounced by the unions as class collaboration. W. Z. Foster and the extreme radicals attacked the B. & O. plan as class collaboration. Often I have heard that said of perfectly sincere efforts to bring the management and the workmen into closer working relations. It is openly voiced by some of the intellectuals of the English Labor Party. Those who prefer to see industrial relations as a fight do not wish to make a unit of the plant. There are unionists who, hearing this talk tonight, might think me unfriendly to labor. I think I am showing the only way that labor can permanently prosper.

We want to do away with the fight attitude, to get rid of sides. Yet there is a sense in which sides are necessary to the richness of that unity which we are here considering, essential even to its existence in any real sense. In any conference between managers and workers the representatives of the workers should represent the workers' point of view, but, as has been pointed out by one of our most thoughtful manufacturers, the workers' point of view of what is best for the plant as a whole. There is a vast difference here. And this principle holds good not only for conferences between management and workmen, but in any committee or conference in the business. In a meeting of the superintendents of departments, each should consider not merely what is good for his department, but the good of the business as viewed from his department. Please notice the last phrase; I do not say that he should consider what is good for the whole business and end my sentence there, as is so often done. I say what is good for the whole *as seen from his department.* We do want sides in this sense.

The question of pay for attendance at Works Councils is interesting in connection with this point, the viewing of the whole from an integral part of the whole. In some plants time spent in the Works Councils is paid for, in others not. In the latter case the assumption apparently is that the workmen are in those meetings looking after their own interests; if it were considered that they were working for the whole plant, then it would seem as if those meetings should be held in company time.

We have then a test for sides whenever they appear. Are they fighting sides or integrative sides? Are they sides which expect

antagonism, arouse the impulse of self-protection against exploitation, or are they parts of a functional unity? If we wish to foster the latter and abolish the former, those set within the fight-pattern, let us see how it can be done.

It is, happily, generally recognized today that the first step in any controversy, in any discussion, and not only between managers and workmen, but on boards of directors, between fellow-managers or wherever, should be to examine the situation irrespective of sides, to get at the facts. We spoke of this when we were considering the question of integration. In one factory I have visited, I found the workers much interested in time-studies, cost-of-living charts etc., and it seemed to me very significant that it should be in this factory, where the facts relative to cost of production were being studied by the workers themselves, that I heard compromise denounced, surely an indication that the fight attitude was weakening among them. One man said to me: "When I worked in a shoe shop, the men were talking all the time of compromise, but here we are shown what we really earn." Others spoke of their objection to the Works Council making requests on the compromise basis. "Let them ask," I heard said, "for what they really think right and then the managers will think them reasonable." This is interesting, I think, when we know so many college professors who are still preaching compromise, so many diplomats who are still working for compromise as the apex of their endeavors.

Moreover, when we are looking at the actual situation we are more apt to follow the process I spoke of two weeks ago as necessary to integration, the breaking up of a whole situation into its component parts and considering these separately. My own experience is that nothing gets rid of sides so quickly as this process. When Minimum Wage Boards vote on a cost-of-living budget as a whole, employees and employers are lined up on different sides; when they take up the items one by one I have invariably seen both employers and employees on each side in the vote. This is because each one is then looking at the facts, at what food, for instance, does actually cost in the year 1924; he is not thinking what his "side" would like to pay the girl.

Again, in a factory where I believe there is an honest endeavor to get at the facts irrespective of sides, one of the employees said to me of

the conference committees, "The line-up is not always of managers on one side and workmen on the other; each question is considered on its merits, and managers as often change their opinions as workmen." Employers can take sides and fight over what wages they would like to give, the unions over what wages they would like to receive, but neither can fight over the question whether girls are actually paying $6.00 or $8.00 a week for board—this is an ascertainable fact.

I think it a good plan moreover, whenever possible, not only that a study of the situation should be made irrespective of sides, but that it should be coöperatively undertaken, as in the case of a Board I was on where we could not agree even on the facts so long as each side was getting them separately and pitting one set of facts against the other. When a sub-committee of both employers and employees was appointed to gather these facts coöperatively, that was a big step toward final agreement.

In the factory just spoken of, where the line-up in conference, it was said, is not always of managers on one side and workmen on the other, I heard few complaints of the management. But I found, on the other hand, that the representatives of the workmen were very wary about going back to their constituents and praising the managers because then their fellow employees might think they were trying to curry favor; as I heard one girl say, "Oh, he just wants to be foreman." But this fear of speaking well of the management, which at first glance might seem unfortunate, works out well, for finding it poor policy to praise, and having little fault to find, there is a tendency to describe to their fellow-workers quite impersonally what has taken place. There is a tendency for the situation to be depersonalized and to be presented as depending on the facts of the case. This seems to me admirable.

When we have got thus far, we find that we have gone a long way toward looking at conference as a matter of conferring, not as a matter of fighting. It is indeed encouraging for the future of business administration that we see so many indications of a growing appreciation of this. A workman in a large plant said to me: "You don't go into a conference committee with a gun under your coat, and that does away with suspicion, for when a man has a gun under his coat, he always thinks the other fellow has two under his." One of the girls

said: "When I first went to a conference committee, I thought I was going there to give my criticism to the management, but I came to understand that coöperation means also taking criticism from the management, and I am more willing now to take it." One man said: "I feel in a conference committee that I'm an agent for both sides." I think that a great achievement for that firm, as great as their success in production. I believe it contributes to their success in production, for this sense of double responsibility I could see increased this man's feeling of self-respect, of the dignity of his work, and everything which does that tends to increase the production efficiency of the plant.

I hope it will be understood that I do not intend all this to apply merely to managers and workmen. I think on every board, in every committee, the same effort should be made, namely, to substitute conferring for fighting, to recognize that there are two kinds of difference, the difference which disrupts and the difference which may, if properly handled, more firmly unite, and to realize that if unity is the aim of conference, it is not because unity in the sense of peace is our primary object—you can get peace at any moment if your sledge hammer is big enough—but because we are seeking an integrative unity as the foundation of business development.

An appreciation of the difference between controversial sides and integrative sides is necessary for the discussion of that "collective responsibility for production," which we hear so often advocated today. There are two quite different conceptions of collective responsibility depending upon whether one has accepted the notion of integrative unities. The Mines Act of 1911 gave the English miners power to appoint an inspector of their own to make a complete examination of the machinery once a month. This was called joint responsibility, but it was not the joint responsibility which is one of the tests of integrative unity. Some one writing approvingly of this Act said that it implied "a definite, statutory right of the workers to take an active and independent part in the prevention of accident." It is the "independent" part that I do not believe in. This Act was not taken advantage of widely because of the fear that adverse reports would mean loss of jobs, but even if it had been, it is probable that the reports of manager's inspector and workers' inspector would

have differed; it is coöperative investigation and coöperative responsibility that we need. In the wood-working industries, however, another method was followed; a joint study was made of the dangers arising from the use of wood-working machinery. This seems to me to rest on sounder principles.

Responsibility for technique as well as for safety has been claimed and gained in many instances in England. The miners at a Yorkshire pit appointed a controller to supervise the distribution of mines underground and paid half his salary. Again, in the Nottingham lace factories, where deductions are made from the pay for spoiled work, quality is judged by a committee of the weavers. These are perhaps all good things as steps, as recognition of labor, but I do not think they should be cited as instances of joint responsibility. I think we shall be in danger of sides in the objectionable sense until all such activities are truly *joint* activities. The joint responsibility of management and labor is an interpenetrating responsibility, and is utterly different from responsibility divided off into sections, management having some and labor some. Mr. Tawney has advocated strenuously the maintenance of professional standards by crafts. This is excellent advice, yet we should remember that management too has something to do with the maintenance of professional standards among workmen. Indeed the responsibility of unions is perhaps something of an anachronism today since the place of the crafts in modern industry is so very different from what it was in the early days of trade unionism.

We have in America an excellent example of a very real appreciation of joint responsibility for technique in the large unanimity of opinion that job analysis should be a matter for experts, managers and workers together.

I have been speaking of the demand of English workers for an "independent" responsibility. The fallacy involved in the word independent seems to me to run through much of the literature of the English Labor Party. Many of the Labor Party are suspicious of "joint control" because it might not allow room for what they call "independent" control. One writer says that the test of all forms of joint control "must be whether in the particular instance . . . the workers' side is independently active." Surely this is the wrong expression. The worker should be active in the fullest degree possible but not "inde-

pendently" active. The question, says this author, is: "Are the workers to play an active part in shaping policy?" Yes, but not an independent part. This author speaks of "the test of actual independence of function," and again of "the test whether or not the workers' side does actually exert an independent force." Independent power? Are we always going to want independent power? Or shall we sometimes see that we actually get more independent power through joint power? Much could be said on this point.

On the employers' side there is often a corresponding mistake. Employers sometimes speak of *dividing* responsibility when they are merely *shirking* responsibility. Many people will avoid a decision in order to avoid being held responsible for the consequences. I know a case of a husband and wife where the husband is autocratic and likes to make the decisions, but when he thinks a particular decision may go wrong he leaves it to his wife! When, therefore, I hear that the workers are going to be given more responsibility, I do not rejoice over that fact at once, I wait to look into the matter and see what it means. A responsibility spread out thin may save your face when things go wrong, but will not correct the wrong. Responsibility will never take the place of technique; let us make no mistake about that.

It is evident, I hope, therefore, that I am not advocating the mere diffusion of responsibility. A large part of business success depends upon how far we can, after allotting responsibility to committees or division superintendents or foremen (we all know how dangerous it is to short-circuit the foreman), how far we can then make these various responsibilities interpenetrate.

I am often misunderstood on this point of collective responsibility. People sometimes think when I emphasize collective responsibility, that I do not believe in decentralization. I know no one who believes more strongly in decentralization than I do, but I believe that collective responsibility and decentralized responsibility must go hand in hand; more than that, I think they are parts of the same thing. Books on business administration often discuss concentrated authority versus distributed authority, but I do not think this discussable. I read the other day in an article on business administration that we must find a happy mean between centralization and decentralization. I do not think that, for I believe we should have both. When the National

Joint Council of Electrical Contractors and Electrical Workers was formed, it was found that joint local councils and joint district councils were necessary through which the national body could function and work out a national policy. That centralization and decentralization are not opposed is, I believe, the central lesson for business administration to learn. To understand this principle and to devise methods for its operation is what we must all work at daily if industry, the government of nations, the League of Nations, are not to fail. I do not minimize the difficulties we shall meet. This is one of our gravest problems: how to foster local initiative and at the same time get the advantages of centralization. The problem is grave, but we must face it; we want no compromise in this matter.

Let us note here a very marked difference between being responsible for a functional whole, what we are here considering, and being responsible for our function in the whole, which has been given far more consideration in the past. We have been so delighted with what has sometimes been called the functional theory, that is, the division of work so that each can do what he is best fitted for, that we have tended to forget that our responsibility does not end with doing conscientiously and well our particular piece of the whole, but that we are also responsible for the whole. A business should be so organized that all will feel this responsibility. We see it in the case of the home. The wife has her duties and the husband his, but in addition to these, or rather by means of these, each has to do his and her part to make the home bear its significance in the life of the community, serve its maximum degree of service to the community. We do try to make our children feel this; I wish we could extend it to the rest of our household, to our servants. What greater dignifying of labor could there be than that which comes from a sense of joint responsibility in community service?

This is the problem in business administration: how can a business be so organized that workers, managers, owners, feel a collective responsibility? The advantages of creating a sense of individual responsibility have long been noted as one of the cardinal principles of business administration, and many have leaned toward employee representation because they thought it was developing this. Some say in the language of the old maxim: Responsibility sobers. Or as

one young manager said to me of his workmen, "They don't have so many darn fool ideas now." The idea of a collective responsibility, however, has been neither fully accepted nor the methods of obtaining it worked out.

I think myself that collective responsibility should begin with group responsibility, that a form of departmental organization which includes the workers is the most effective method for unifying a business. In one business, where there is a strong feeling on the part of the managers that the worker should be given responsibility to his full capacity, group responsibility is encouraged wherever possible. For instance, the chauffeurs asked for shorter hours. They were given a fifty-four hour week with overtime, and the chairman and secretary of the chauffeur group, acting for the group, assumed the responsibility for each man giving an honest week's work. We see the next step in collective responsibility, *inter*departmental relations, in a store where, for instance, the elevator force has meetings at which are considered how the elevator force can help the store superintendent, how it can help the charge office, the advertising office, the information bureau, the mail order department, etc. Such steps are of course mere beginnings in the solving of what seems to me the crux of business administration, the relation of departments, of functions, however you wish to put it. Any study of business as an integrative unity should, I think, make this problem its chief concern.

An understanding of this principle of integrative unity which we are considering tonight will keep us not only from a false individualism, but also from a false altruism. For instance, if we dislike many of the old ways of hiring and firing which often left too much to the mere whim of the foreman, we sometimes say that we dislike these methods because they are not fair to the workman, but the truth is that we do not change these methods in order to benefit the workman only, but because the change will benefit the business as a whole. Or take the necessity of regularizing employment so that seasonal or so-called "cyclical" fluctuations will be reduced. This need should not be taken up solely as a grievance of labor, for there is loss in overhead as well as loss to the employees. Again, the arbitrator should arbitrate for the institution. This should go without saying, but a union girl asked, "Is he pro-labor"? You can be *for* labor without being *against* capital; you can be for the institution.

When you have made your employees feel that they are in some sense partners in the business, they do not improve the quality of their work, save waste in time and material, because of the Golden Rule, but because their interests are the same as yours. Over and over again in the past we have heard it said to workmen, "If this were your material, you wouldn't waste it," and over and over again that admonition fails. We find, however, that when there is some feeling in a plant, more or less developed, that that business is a working unit, we find then that the workman is more careful of material, that he saves time in lost motions, in talking over annoyances, that he helps the new hand by explaining things to him, that he helps the fellow working at his side by calling attention to the end of a roll on the machine, etc. This is the Golden Rule taken behavioristically. It is, by the way, the Golden Rule taken idealistically, too, for a functional whole is a much higher conception than our old notion of the Golden Rule.

Before we leave the subject of joint responsibility, I should like to ask you how far you think that should go. We might base our discussion of this on a case which came up in Wisconsin a few years ago. After the workmen's compensation law was passed in Wisconsin, a case in dispute came before the Industrial Commission for decision. A teamster got drunk in his employer's time, fell off his wagon and was killed. His widow petitioned for the amount of indemnity to be paid by the employer and won. The Supreme Court sustained the decision and later the Legislature sustained their opinion by making the law more explicit. Professor Commons tells us that back of the overt reasoning in this case there was the feeling of group responsibility. "On the former legal theory of individual responsibility," he says, "these decisions could not be justified. Only on a theory of partnership or solidarity of interest can they find justification. Employer and employee are engaged in a common enterprise. They jointly assume the risks and share the burdens and the benefits of the enterprise. More than that they share each other's frailties." I cannot see the matter wholly in this light but I should like your opinion on it, for a principle recently and soberly embodied in the law of one of our states is worth consideration.

I want to add one word more in regard to this conception of joint

responsibility, joint control, and that is to point out that what we are considering tonight is not at all the same as the conception of reciprocity so often advocated. I disagree with Professor Commons that "loyalty is an expectation of reciprocity." Our obligations, our responsibilities, our loyalty, should be, as we said of obedience last week, to a functional unity of which we are a part. Robert Valentine said: "Employers should stop talking about the loyalty of their employees until they are ready to make an equal noise talking about their loyalty to employees." This was well worth saying, but if Mr. Valentine were here today he would say, I think, that this is a rather crude way of looking at the matter compared with our present conception of loyalty as part of the process of creating business unities.

Joint loyalty, then, joint responsibility, are very different conceptions when considered as an interweaving of obligations and when considered as a reciprocity of obligations. I wish you would make a note of this fallacy wherever you find it, in your reading or in your observation of business administration. For instance, Mr. Leiserson asks: "Does the company desire to do justice as the company sees it, or is the employer ready to administer justice to his employees as they understand justice?" But why should Mr. Leiserson think the latter any better than the former? It seems to me that it is just as true in regard to the standards for the conduct of business as it is for control, responsibility, loyalty, that standards, too, must be jointly developed. And the immediate moral of that is that the organization of the plant should be such as to make this possible.

The first test of any part of business organization and administration should be, I think: how far does this make for integrative unity? Take the question often discussed, and sometimes made a practical issue, whether foremen should belong to unions. The arguments in this discussion are not based on the theory of integrative unity, but on the theory of sides, controversial sides. Indeed perhaps no one subject could throw more light on the subject of this evening than the foreman's position, and if there had been time I had intended to give a section to that. If, however, we have not time for this or many other interesting questions, there is one point I wish to speak of, and that is that managing itself is an interpenetrating matter, that the distinction between those who manage and those who are managed is

somewhat fading. We are on the way, it seems to me, to a different analysis of services from that which we now have. This is the most valuable suggestion, I think, in a very valuable paper read by Mr. Dennison to the Taylor Society last year. Mr. Tawney has also shown us that no sharp division can be drawn between management and labor, and that the line between them fluctuates widely from industry to industry with the nature of the work carried on. "There are certain occupations in which an absolute separation between the planning and the performance of the work is, for technical reasons, impracticable. A group of miners who are cutting and filling coal are "working" hard enough. But very little coal will be cut . . . unless they display some of the qualities of scientific knowledge, prevision and initiative which are usually associated with the word 'management.' What is true of miners is true, in different degrees, of men on a building job or in the transport trades. They must exercise considerable discretion in their work because, unless they do, the work does not get done, and no amount of supervision can compensate for the absence of discretion." That is a sentence worth remembering—no amount of supervision can compensate for the absence of discretion.

We can all see daily the truth of the statement that not all the managing is done by the management, that workers are sometimes managing. I can see this clearly in my household; if my cook plans my meals as well as cooks them, she does some of the managing of my household. It is claimed that the plan of the B. & O. of bi-weekly conferences between managers and employees in the workshops has produced the following results: reduction in labor turn-over; routes of carrying material shortened and made easier; fuller and more regular operation made possible; the average delays per week behind schedule reduced; monthly materials per employee reduced; and the work of repairs greatly facilitated as well as the quality improved—the problem of getting a steady flow of adequate material was solved and certain difficulties in the tool-room which wasted time were straightened out. This is all part of the service of managing. But even when the workmen's managerial capacity is not tested so far as this, there is usually room for some. Whenever labor uses its judgment in planning, that perhaps is managing. If the worker is given a task and

allowed to decide *how* he will do it, that perhaps is managing. It would not be possible to carry on a business if the workers did not do some managing.

There are two ways, however, of looking at this matter of managing ability among the workmen. One executive says: "We wanted to get any managing ability there was, from counter, stock-room, truck delivery or wherever, into the management. We wanted it for ourselves as well as to help the people advance." This is certainly sound business sense, but then in addition to this, it seems to me that there is another attitude to be taken. It should be recognized that almost everyone has some managing ability, even if it be very little, and opportunity should be given each man to exercise what he has on his actual job. If all on the managerial force have—as of course they have—initiative, creative imagination, organizing and executive ability, there are many workmen who are not entirely lacking in these qualities. We want to make use of what they have. If the job of every workman were analyzed so that each could understand what opportunities he had for managing, that might have both a direct and an indirect influence on production. Indirect because this might greatly increase the workman's self-respect and pride in his work, which is so necessary for the best results. A workman who had sat on a good many conference committees said to me with dignity and pride: "When I am on that committee I am the equal of anyone; of course when I go back to my work I am just a workman, but while I am on that committee I am the equal of the President himself." I told that to the President and he said: "He must be made to feel that all the time." Yes, but the difficulty is how. I wish you would consider that. Perhaps one way would be so to analyze each man's work that he would realize that he had some managing to do as well as the President.

To be sure the awards for suggestions given in so many plants now are a recognition that the workman has managing ability. This recognition is however not yet sufficiently widespread. The post-office workers of England have repeatedly claimed that they have made suggestions for the improvement of the service which have been turned down. In a group of Derbyshire miners one man rose and said, "There isn't a man in this room who hasn't time and again

made suggestions and been told that he was paid to work and not to think."

Whenever the trade unions show managing capacity, I think they do more for their cause than by any other of their activities. When the Amalgamated worked out a plan of employee insurance, when a few years ago the Photo-Engravers Union of New York drew up a new price-list, submitted it to their employers and won its acceptance, they went far beyond the function of unions as defence organizations.

In England we have several examples of plans from the workers actually making possible the continuation of production, as in the case of the British Westinghouse employees when the managers were thinking of closing down the foundry on account of the high cost of production. The fact that workers themselves have in many instances treated the disputed points between employers and employees as problems rather than matters of rights is a hopeful sign that the workers' demand for share in control is not a mere gesture for "power," that they feel in themselves managing capacity.

If the worker's job ought to be analyzed to see what part of it is managing, so the managers' jobs should be analyzed to see if to any part of those the workers could contribute anything. It may be found that even in those activities which have been considered exclusively the functions of the managers, as correlating the selling and production departments, the buying of material and equipment, the control of the flow of material through the plant so that there will be no congestion—even to these the worker can make some contribution. The direct dependence of the worker on management is obvious. The piece-workers' earnings depend on the quality of material supplied by the purchasing agent, on the efficiency of the machinery and the flow of material. Unemployment depends partly on whether fewer orders have been taken than could be filled. If the sales department is over-zealous, profits may be wiped out by overtime. The hewer in the coal mines in England is paid for the amount of coal that gets to the surface, and that depends largely on the supply of tubs and the arrangements for haulage. In the charges before the Coal Commission, the following complaints were often heard: too little coal-cutting machinery; too little mechanical haulage, shortage of trains,

tubs, rails, horses, and of timber for pit-props; bad distribution of rolling stock. It seems only fair that the workmen should not be held responsible for what the managers have a large share in through defective planning in the technique of the industry. It is obvious now, I think, that joint action is necessary in the development of industrial technique.

I should like to say, in summary of this section, that as we have always known that no sharp line could be drawn between planning and executing—one set of men does not do all the planning and another set all the executing, the higher executives are those who have the ability to contribute to the planning and are paid more for that reason—as we have always known this, so now we see that no absolutely sharp line can be drawn between management and labor, that the division between those who manage and those who are managed has been in part artificial. There is one point, however, that needs further consideration. Should planning that is done incidentally as it were be called managing? Is not responsibility always a part of managing? Should anyone, strictly speaking, be said to manage unless he both plans and takes some responsibility for that planning? I should say that when men are allowed to use their own judgment in regard to the manner of executing orders, *and accept the responsibility involved in that*, they are managing. But this is a question I hope we shall discuss.

We shall all agree on one point however: there should be no haziness in regard to employee functioning in a managerial capacity; the limits of such functioning should be frankly and sharply defined. For instance, the Works Council is sometimes a judicial body; sometimes a legislative body; sometimes an advisory body; it is never an executive body. This should be openly recognized. To be honest and clear-cut in delimiting function is, I believe, essential to the success of the redistribution of function.

This matter of redistribution of function will not only, I think, have a direct influence in increased production and better conditions for workmen, but will indirectly affect policy. We cannot now foresee how far changes in internal organization will change business policy, but as the marketing coöperatives have in some instances changed the agricultural policy of the farmers, so it may happen that the

reorganization of business on the inside may change business policy. It may be indeed that the whole machinery of competitive capitalistic business will be in some degree altered.

I have had time in one evening to give only hints of what I mean by functional unity in business. Let me emphasize a few points even if I can do so by scarcely more than headings. First, the interdependence of all the activities involved is clearly evident. There really is not such a thing, strictly speaking, as a departmental problem; there is hardly a problem, moreover, which can be considered one purely of production or distribution. The parts of modern business are so intricately interwoven that the worker, in order to have an intelligent opinion in regard to even his own problems, has not only to know something of processes, of equipment, has not only to consider the effect of the introduction of new machinery and the training of the worker; he should also understand the connection between the production and the commercial side, should know something of the effectiveness of the sales organization—misguided sales or purchasing policies may ruin a business. There are many now who think the worker should study unit costs, but he cannot understand low unit costs, can he, without knowing something of the terms of securing credit which help to determine unit costs. Moreover, I think some knowledge of the general business and trade policy—adjustment of supply and demand, prospective contracts, even the opening of new markets—would make the opinion of the worker on production processes more valuable.

While the necessity of team-work between the departments is recognized by every one, the methods for obtaining it are not yet sufficiently worked out, and the matter is sometimes a little blurred by the fact that different departments are working at different things at any one moment. The manufacture of cigars is almost a continuous process because cigars have to be fresh, but the buying of the tobacco has to be concentrated in short periods in spring and summer. The signing of contracts for delivery takes place at a different time from the manufacture of the product. This, however, does not change our problem; it merely makes it a more intricate one.

Besides all these relations which I have named, there is the newer one of production manager and personnel director, an important and

often very delicate matter. As one Works Manager said, "Why is this young man of thirty-two supposed to know more of human nature than I at fifty-eight?" We are sometimes told how necessary it is that these two should "get on" together, but *you* all know that unless the personnel director does a good deal more than "get on" with Works Manager or Manufacturing Committee, he will not be of the greatest usefulness to his firm. In fact one of the things I feel most strongly about business administration as it exists today is that until we find some better way of uniting technical and so-called psychological problems than we have at present, we are far from efficient business administration.

Another necessary unifying we have not considered is the relation of the main firm to its branches—branch banks, branch stores, or a number of plants operating under one management. Many problems would meet us here, but we can use the same principles in trying to solve them.

In concluding my necessarily meagre treatment of what I have called integrative unity, I should say that the efficiency of many plants is lowered by an imperfectly worked out system of coördination of parts. In some instances what coördination there is depends chiefly on the ability of certain heads to get on together; their willingness to consult each other depends too often on mere chance qualities or conditions—perhaps whether certain men commute by the same train! An adequate system of coördination has not yet, so far as I know, been worked out for business administration.

It is impossible, however, to work most effectively at coördination until you have made up your mind where you stand philosophically in regard to the relation of parts to the whole. We have spoken of the relation of departments—sales and production, advertising and financial—to each other, but the most profound truth that philosophy has ever given us concerns not only the relation of parts, but the relation of parts to the whole, not to a stationary whole, but to a whole a-making. What does this mean in business? It means that the sales department for instance, should have some principle by which to test the relation of a sales policy to general policy. Books on management sometimes tell us that the production manager should subordinate departmental policy to business policy. I do not agree

with this. In the "Bulletin of the Taylor Society" for February, 1924, it is stated that "any department head should recognize organization policies as more vital than his own." I wonder why more "vital." Or I have seen it stated that department heads should realize that general policy is more "important" than departmental policy. He should not because it is not, any more than the United States is more important than New York, and I am no states-righter either. Coördinate manufacture and sales? Certainly, also work out the relation between manufacturing and general policy and between sales and general policy, always remembering that general policy is, or should be, no air plant, but that all the time manufacturing and sales policies are contributing to general policy. The production manager should not subordinate departmental policy to business policy; he should contribute it, and he should see that it is a contributable policy. That is the chief test of the production manager, whether his policy is a contributable policy.

I should like to say parenthetically that in order to consider this subject in one evening, we are leaving out many questions. Perhaps to secure independence of outside capital is necessary to functional unity, but such questions would carry us too far afield tonight.

So far we have been looking only at the unifying of a single plant in its many relations. We have left out of consideration the question of unifying a whole industry although obviously that is very important. Many shortline railroads cannot pay if considered separately. In a number of industries, profits as a whole could make reasonable return on that industry as a whole. If the industry were considered as a whole, the so-called marginal plants might be kept going. Again, wages cannot be set by one plant; the tendency is toward equalization in the same trade over considerable areas. This applies also to hours of work. Moreover, it is the whole industry which should take into consideration the demand for its product; one plant cannot, to the greatest advantage, organize its production in relation to the demand. This is part of the problem of unemployment. The selling agencies throughout an industry should have some connection if production is to be regularized.

I need not speak at any length of how much competing firms have

in common and the many instances we have of the increasing recognition of that, as in the case of the two rival Ohio firms who arranged for transfer from one plant to another for promotional purposes. (I am aware that the radicals would say that was probably a move against the consumer, but I do not want to go into that now.) The Joint Council of Electrical Contractors and Electrical Workers made an arrangement in New York in 1919 or 1920 for the exchange of skilled workers, and set up an employment bureau. It was thought at the time that statistics on cost of living, etc., could be pooled, wages and working conditions standardized, and the flow of labor to some extent controlled. The stated object of the National Industrial Council movement of England was increasing uniformity in labor standards *by industries*.

And beyond all this, beyond the matter of the unifying of single plants, beyond even the unifying of all the plants in the same industry, there is still another way of looking at business unity which should be one of the chief concerns of the business administrator. He sees the three classes: (1) workers, including industrial and managerial workers, (2) consumers, and (3) investors. The chief job of business is to find a method for integrating the interests of these three classes. I have said nothing of the consumer because there has not been time, but when we find employers and employees uniting against the consumer to secure higher prices, tariff regulations or other preferential advantages, when we are told that the cotton industry in England will always, in case of anticipated government interference, respond to the call of "Lancashire against London," then we see how important is this branch of our subject.

Just as the *relation* of jobs is a part of job analysis, just as the *relation* of departments is a part of scientific management, so a study of all these relations just mentioned should be a part of the study of business administration. I wish it were not so often assumed that the subject of personnel relations in industry applies only to employers and employees. The manager has to get credit from the bankers, make dividends for the stockholders, and he has to deal with his competitors. To be more exact, the manager has relations with (1) bankers, (2) stockholders, (3) co-managers and directors, (4) wage-earners, (5) competitors, (6) the people from whom be buys, (7) customers.

The business man has probably the opportunity today of making one of the largest contributions to society that has ever been made, a demonstration of the possibility of collective creativeness. Many writers tell us that we are living in a barren age and deplore this as a sign of our degeneration. These writers look to the periods of creative energy in the past and find there their Leonardos and their Dantes; they then look around today and, seeing no Leonardos nor Dantes, deplore the unproductiveness of our modern civilization. Such people make the mistake of connecting creativeness always and inevitably with individuals. They do not see that we are now at the beginning of a period of creative energy, but that instead of being the individual creativeness of the past which gave us our artists and our poets, we may now enter on a period of collective creativeness if we have the imagination to see its potentialities, its reach, its ultimate significance, above all if we are willing patiently to work out the method. In the field of politics we see little to encourage us; but in the League of Nations, in the coöperatives, above all in business administration, we see an appreciation emerging, not in words but in deeds, of what collective creativeness might mean to the world. Much of our theoretical writing accepts without analysis time-honored phrases and notions, treats as fundamental ideas the crude, primitive attempts to get at democracy by rule of thumb. The world has long been fumbling for democracy, but has not yet grasped its essential and basic idea. Business and industrial organization is, I believe, on the verge of making large contributions to something far more important than democracy, democracy in its more superficial meaning—to the development of integrative unity. Business cannot serve its maximum degree of usefulness to the community, cannot perform the service which it has, tacitly, *bound* itself to perform, unless it seeks an enlarged understanding of the practical methods of unifying business organization.

XII

THE PSYCHOLOGICAL FOUNDATIONS: POWER

By M. P. Follett

I asked a number of workmen in two factories, both of which had some form of employee representation, "If a question came up where you had to decide between loyalty to your union and loyalty to the works, which would you choose?" The answer was always, "The union." Then I asked for their reasons, and here is the summary: (1) "I have taken an oath to the union; (2) the union is a permanent relation, the factory is not; (3) the unions have power back of them, the works council has not." Oath, permanency, power, but the greatest of these, I felt, was power.

Power, or control, is a word which we find on almost every page of English labor literature, and frequently enough in our own. One of the leaders of the Sheffield Shop Stewards movement said: "We organize for power," the baldest and most succinct statement I have seen.

One of the most urgent problems of business today is the relation of bargaining to value, and bargaining rests on power. He seems to get the best of the bargaining who has the greatest power. But is bargaining the only determinant of value, whether of goods, labor, or what not? What of scientific management? Does not every business man find one of his most pressing problems to be: how to integrate bargaining and scientific methods? As far as I have seen, scientific methods do not, cannot perhaps, set exact values; at present they merely set the limits of the bargaining process. Within those limits bargaining still goes on.

We shall give this evening to the question of power: first to some general consideration of the subject and then to labor's demand for power.

No word is used more carelessly by us all than the word power. I

know no conception which needs today more careful analysis. We have not even decided whether power is a "good" word or a "bad" word. Is the wish for power the desire of grasping and unscrupulous men, is it the "instinctive" urge of our lower natures; or is power a noble, the noblest, aim? Or is it neither of these? What is power? Is it influence, is it leadership, is it force? Why do we all like power? Because we wish to use it to satisfy our desires, or do we just like the feeling in itself? In the case of the men you meet every day in business, either your business associates or your workmen, do you find them trying to satisfy an "urge" to power; or do you find them merely trying to get what they want and seeking power in order to secure their ends? We are often told that there are many men who, after they have accumulated enough wealth to satisfy every want, keep on accumulating from mere love of power. Do you think this is so or do you think that there are still unsatisfied desires which motivate their activity?

Among the psychologists there is much difference of opinion on this subject. Some tell us that the urge to power is instinctive, is inherent in all human beings; others deny this and say that power is desired merely as means to end. Dr. Allport, in his *Social Psychology*, tends toward the former point of view. Dealing with social control he tells us that there is a universal tendency to produce reactions in others, a tendency which probably originated in the habit developed in infancy and early childhood of controlling parents and nurses in order to secure satisfaction of the bodily needs. As we grow up and become more self-sufficient, the old habit persists in an inclination to control merely for the sake of controlling; not now, you see, means to end. I do not know whether this is so or not, for I do not think we have sufficient proof yet to establish its validity, but it is certainly interesting. Dr. Allport points out that the drive for the control of others (he has committed himself to a good deal by using the word "drive") often does not go to the extent of trying to determine their reactions, but simply to make them react. We could all give instances of this. My guide in the Adirondacks, if we came on a deer out of the hunting season, as we paddled up some lonely creek, would startle me, after an instant's silence, with a sudden yell. He could not shoot, but he could shout and make the deer run, make it *do* something.

We often see between two people the wish, not necessarily to get submissive reactions, but to get any reactions at all. A man will deliberately rustle his newspaper so that his wife will react in some way. She may not look up and smile either; she may frown, or she may irritably ask him to stop making a noise, but he gets some satisfaction even from that. (Perhaps I ought in fairness to add that the only time I have seen this done, it was the wife who rattled the newspaper.)

There are jurists also who talk of a "natural urge" to power, who tell us that the wish to keep a balance of power is such an urge. They say, for instance, that when you feel gratitude, it is the "urge" to regain an equilibrium which has been destroyed by the favor you have had conferred upon you. We can call it by a fine name, elevate it to a virtue, but what it really means is, we are told, that if I am under obligation to you for some favor conferred, I feel an unpleasant sense of your power, and so I return the favor in some way in order to restore the equilibrium between us which has been disturbed. This seemed to me a very strange idea the first time I came across it, but that very day I asked a man, staying in Boston to give a month's lectures at the Harvard Business School, what he thought of the idea, and instead of saying, as I expected, that it was absurd, he replied: "Of course it's so; here I am spending a month with [a well-known man in Boston] and I shall feel that I am in his power until I can think of some way of paying it back."

Some ethical teachers tell us that the whole subject resolves itself into the question: What do you want power for? That is not a wholly bad question for those interested in business administration. Take the alarm over absentee ownership voiced by a number of people. A good thing, too, that it should be; yet when we hear of the effort of some management to free itself from the domination of absentee-owned capital, we immediately think, What is their motive?

Bertrand Russell has had a good deal to say lately about the *motive* for power. He is very pessimistic over the development of science, for he says that the benefits go to the power-holders, and that the purposes of the power-holders are in the main evil.

But whether power is "good" or "bad," whether it is sought as means to end or as end in itself, most people are much of the time

trying to get power. In conversation people try to impress others with their ideas, their feelings or their personal experiences. Some writers call this the egotistic impulse, but that seems too general; on further analysis we should probably find that it comes from the desire for ascendancy. For instance, the psychologists tell us that we like telling a good story because it makes us the centre of interest. Perhaps, in addition to this, it is because for that moment we are controlling others, for an instant we have others completely under our sway. And we must remember that this desire for ascendancy which we see in some form in almost every conversation, is by no means always, nor perhaps usually, because we wish to use at the moment the power gained; we like to bank our power, and keep a good balance on hand to use in large lumps as occasions arise when such use would be of distinct benefit to us.

I think the best way of understanding power would be to make some study of it in our daily lives—in our homes, in our business, or wherever we are—to observe when it appears and why and what the results are. I am always hoping in a group of this kind to find some one or two who will be sufficiently interested to do this with me, watch to see what gives one person influence over another: social position, professional standing, the special knowledge of the expert, wide experience, mere wealth, age, sex, certain personal characteristics, even physical strength. If any of you will do this I want to suggest that in such study you take provisionally the following definitions of power, control, authority, and see what you think of them. Power might be defined as simply the ability to make things happen, to be a causal agent, to initiate change.[1] Perhaps the "urge to power" is merely the satisfaction of being alive. Of course there are many different kinds and degrees of satisfaction. The boy throwing stones at a bird gives us an example of a very elementary kind; his "urge" is to make the bird do something—fly away. As a fuller kind of satisfaction we might note that of the violinist. It has always seemed to

[1] This is not my own final definition of power, which I shall give at another time, but it is good I think so far as it goes, and therefore can be used legitimately without involving ourselves at present in a definition which might have fuller connotation, but which might not be so simple to handle and apply in our daily jobs.

me that the violinist must get one of the greatest satisfactions of being alive; all of him is enlisted, he surely feels power. Probably the leader of an orchestra feels more. And this comes nearer the kind of power the head of a business feels.

Control might be defined as power exercised as means toward a specific end; authority, as vested control. And we should remember in this study that power and strength are not always synonymous; it is sometimes through our weakness that we get control of a situation. In the London Conference last summer Germany's greatest power was her economic impotence. That is, her bargaining power was the result of the economic condition to which she had been reduced by the demands made upon her by the Allies. We all know that the invalid in a household has, and sometimes exercises quite ruthlessly, power over the well and strong members of the family.

We should notice, too, in this observation of power which I am urging, all the different uses of the word. I saw the other day "the power of Wall Street" spoken of as an ominous thing. Is the power of Wall Street a good thing, a bad thing, or neither? A man said to me once: "I like deer shooting because it gives me a sense of power." Robert Wolf's method of beating one's own record, which he has used so successfully, is in part an appeal to the sense of power. As I have just mentioned Wall Street we might perhaps to some advantage compare the power of Wall Street with the power aimed at by Mr. Wolf for his workers. I have found this observation of the way the word power is used an interesting study. I am making a list of all the different definitions I come across, by novelists or artists or wherever, and I find this all helping me in my observation of power in everyday life. I think it would help also in business administration, make us more alert and more discriminating; make us wiser in our decision when an employee asks for more "power," when he claims that something belongs to his province which we had taken for granted was in ours. We may decide for him or against him, I am not saying that this foretells what our decision will be, but if we have given some attention to this subject, we shall feel surer that our decision is just; we shall also be able to save time when examining his claims by this preliminary consideration of the subject, by knowing a little where we stand in general before we have to take up a particular situation.

A very interesting thing to observe, which I must not omit to mention, is the connection between rivalry and power. I wish you would watch yourselves and competing firms and see if you can draw any line between rivalry and "urge to power." The psychologists see a difference here. One tells us that in contests of strength of handgrip between two boys in laboratory experiments, it was found that the rivalry attitude gave way almost immediately to an attitude on the part of the stronger to *conquer* his opponent. This is significant for business competition.

We have innumerable opportunities for the study of power; we might to great advantage, I think, study the farmers' present striving for power. Are they seeking merely higher and more uniform prices; or do they wish to gain power over, or equal to, other groups?

I think one certain gain would come from a study of power; we should learn to distinguish between different kinds of power. For instance, there is the man who beats his rivals by getting, by hook or crook, special privileges in regard to freight rates. That gives him power. But the man who beats his rivals through better business administration, by producing better goods at equal price to the consumer, or the same goods at less price, has power too. We have here obviously two different kinds of power.

We have been considering what we must watch if we wish to study the question of power. Let us see if we can get a little nearer the core of this question. So far as my observation has gone, it seems to me that whereas power usually means power-over, the power of some person or group over some other person or group, it is possible to develop the conception of power-with, a jointly developed power, a co-active, not a coercive power. In store or factory I do not think the management should have power *over* the workmen, or the workmen over the management. It is right for the employers to resist any effort of the unions to get power-over. Last week, moreover, in our talk on *Business as an Integrative Unity* we considered the difference between the "independent" power which the English labor unions are seeking (I use their expression) and joint power. Every demand for power should be analyzed to see if the object is "independent" power or joint power. That should be one of the tests of any plan of employee representation—is it developing joint power?

If anyone thinks that the distinction between power-over and power-with is a fanciful or personal distinction, I am pleased to be able to say that these two prepositions are used to mark a distinction in law; you have rights over a slave, you have rights with a servant.

Of course at present, as I have said, most of us are trying to get power-over. Much of what is called "applied psychology" has this for its aim. The salesmanship classes teach this, (although I tried to show two weeks ago that a sounder psychology could do better than this); the men being told how to conduct business interviews are being taught this. The so-called psychology of advertising is not concerned with giving information but with gaining power. Many of the trade unionists in the labor education movement wish education for power, that is, increased power in the fight with capital. The head of a Central Labor Union said to me: "I'm for the Trade Union College; we lose out because we send a $1500 man to meet a $10,000 man; the trade unionists have got to educate themselves." I must in justice, however, add that I know unionists who are trying to develop power in the unions in the sense of increased ability to join with management in a coöperating efficiency, a coöperating responsibility, and this is a happy sign.

And I certainly need not go to either capital or labor to find examples of power-over. Reformers, propagandists, many of our "best" people are willing to coerce others in order to attain an end which *they* think good. I have seen it stated, in what was supposed to be a progressive article, that workmen should be led, not driven. Well, leading is often power-over. The demagogue, the ward boss, the labor leader, the crowd orator, all lead, all try to "persuade"—a very innocent sounding word until you examine it. A workman, however, said to me: "In this factory they don't just try to persuade us, they try to convince us"—a very discriminating statement on the part of this man and a tribute to the management of that factory.

This is something we have to watch for in our study of power, in a conference between two or three business men, a consultation of doctors or wherever, namely, how far persuasion is taking the form of power-over. Some very keen observation and subtle discrimination are needed here, for you will see many ways by which this is sought: reason, suggestion, emotion, ascendancy of personality, etc.

And since industry today is tending toward the conference method, toward committee government, this is an important study. One of the tests of conference or committee should be: are we developing genuine power or is someone trying unduly to influence the others? A workman in a plant where there is employee representation said to me: "I don't want to be led and I don't want to be patronized, and I watch all the time to see if I am." Notice particularly the first phrase, "I don't want to be led."

But we are now getting near a subject which I decided not to include in these talks because it has been treated so fully and so adequately by others—by Le Bon, by Martin, by Allport—and that is what crowd psychology tells us of power; it is obvious that the getting of power might be considered largely as a matter of creating conditions favorable to suggestibility. Much of the crowd literature assumes that ninety per cent of our life is lived under the laws of suggestion and imitation, which means power-over. Granted as large a per cent as you please, I still think we may recognize that there is such a thing as power-with.

The insidiousness of power-over is very well illustrated by Ghandi. Surely his method of non-coöperation was a use of power, the only power he and his followers had: the non-payment of taxes, the boycotting of English merchandise, refusal of honors and titles, of civil and military posts, refusal to attend schools, etc. Ghandi made declaration of "war to the end." Well, war is war. I cannot see that Ghandi's *method* is so different from that of any strike. In his *Letter to all the English of India*, of October 27, 1920, he said: "I wish to conquer you by my sufferings." Was not this a rationalization in effect? It was literally true, but while to Ghandi this had a high, spiritual sound, what was it really but a wish to gain power, to gain power through suffering? We find nowhere in Ghandi's life, letters or speeches any wish to discover a meeting ground for his party and the English. He says he believes in "the power of the humble," thus using the very word power. Was it their humility which gave Ghandi's party the measure of success which they had, or was it their unanimity, their earnestness and sincerity, their passion of conviction?

We see here how closely power is connected with the fight image

when Ghandi calls his struggle a "war of the spirit." In order to make conflict constructive, I think we should try to abolish the war image as rapidly as possible. When the tobacco coöperatives of Greensboro, N. C., were invited to their second annual picnic at the Guilford Battle Ground, they were urged to come to "the spot where our fathers fell in deadly combat with the enemies of political freedom," and hear "the living heroes of today in mortal combat with the subtle, intriguing enemy of farm economic freedom." This is not the spirit of Ghandi, but the same fighting appeal is made in both cases.

This is a rather long introduction to our subject. And these preliminary considerations have been of the most general character. My aim has been, not exhaustive analysis, but to arouse in you a wish to be more analytical toward your own experience in regard to the matter of one person having what is commonly called power over another person, or one group over another group, one nation over another nation.

But even with all that I have left out, my hour is more than half over, and we have time now to consider only two points, and those very briefly: how to reduce power-over, and labor's demand for power. One way of reducing power-over is through integration, which we considered in our first evening together. The integrating of desires precludes the necessity of gaining power in order to satisfy desire. Do you remember the instance I gave of the conflict in the Dairymen's League in regard to precedence at the creamery platform, a conflict which became so serious that it almost broke up the League? If either side had won in the fight, there would have been power-over, but by finding a solution by which the desires of both sides were satisfied, by integrating the desires of the two sides, power-over was prevented.

I hope it will be seen that what I have called legitimate power is produced by that circular behavior described in our first talk. This is, I think, almost the heart of the whole matter and deserves more attention than this mere passing notice. Circular behavior is the basis of integration. If your business is so organized that you can influence a co-manager while he is influencing you, so organized that a workman has an opportunity of influencing you as you have of influencing him; if there is an interactive influence going on all the time between you,

power-with may be built up. Throughout history we see that control brings disastrous consequences whenever it outruns integration. Is not that the trouble in India? Russia has to use arbitrary authority because she has not yet learned to integrate. And was it not perhaps the greatest weakness in Woodrow Wilson that he thought control could outrun integration?

We can get still nearer the core of our problem in this matter of reducing power-over by recalling what we spoke of in our second talk, when we were considering the question of giving orders, as the law of the situation. If both sides obey the law of the situation, no *person* has power over another. The present-day respect for facts, for scientific methods, is the first step in this method of seeking the law of the situation, and already we see that it has influenced the whole tone of industrial controversy. Take the case of bargaining between employers and employees. As wages are coming more and more to be fixed by cost-of-living charts, by time-studies, by open books on cost of production, bargaining is more and more eliminated or, I should say, subordinated. It might be put thus: bargaining becomes limited by the boundaries set by scientific methods of business administration; it is only possible within the area thus marked out.

It is the same in international controversy. The pitting of power against power goes on, yet the reports of the expert are today taken into account to such an extent as appreciably to limit the bargaining process. Every commission, industrial or international, has its staff of economists, statisticians, accountants, engineers, experts of all kinds. The Dawes Plan has been spoken of as a triumph of the bankers. Is it not rather a triumph of facts against empty assumptions? The Dawes Plan first of all disposes of certain fictions. Nowhere do we see more clearly than in the case of reparations the value of facts against assumptions; as time went on it came more and more clearly to be seen that it was not a question of "sympathy" for France or for Germany, but of the facts of the situation. Facts, by reducing the area of irreconcilable controversy, reduce power-over.

As clearly as we see that the consideration of facts reduces power-over, do we see that the withholding of facts is often used as a means to gain power-over. The chief weapon of the speculators is to keep facts from the public. Open prices have been fought for years

because so many business men have been afraid they would mean a loss of power. The coöperatives have arraigned big business for its secretive methods, yet I know at least one marketing coöperative which refuses to publish warehouse receipts, or to give information as to solvency, to publish prices until the end of the year, to give overhead cost or number of members, because they fear that such information will give power into the hands of the middlemen.

Do we not see now that while there are many ways of gaining an external, an arbitrary power—through brute strength, through manipulation, through diplomacy—genuine power is always that which inheres in the situation? Our first search should always be to discover the law of the situation. For instance, the middlemen are preventing the farmer from having the power which belongs to his situation; it is hoped that the marketing coöperatives will give him that power. Yet, as I have indicated above, we have not got rid of power-over in the coöperatives. I do not think we shall ever get rid of power-over; I do think we should try to reduce it.

To sum up our consideration of power-over. Power-over can be reduced: (1) through integration, (2) through recognizing that all should submit to what I have called the law of the situation, and (3) through making our business more and more of a functional unity. In a functional unity each has his function—and that should correspond as exactly as possible with his capacity—and then he should have the authority and the responsibility which go with that function.

Perhaps it will throw some light on the subject of power if we consider labor's demand for power. While the employer's attitude on this question of workers' share in management has radically changed of late years; while the employer no longer says, or not often, "These men have the damned impudence to want to run my business," still he has not sufficiently analyzed the workers' demand for power. Let us ask ourselves some questions in regard to the workers' wish for what they call share in control.

1. Is this the instinctive urge to power?
2. Is it, on the other hand, a means—to higher wages, shorter hours, better working conditions?
3. Is it the "instinct" of workmanship, and therefore a means to an end? That

is, does the workman, suffering sometimes under inefficient management, wish enough share in management to enable him to do his work as he thinks best? The glass-bottle makers in England will not work under a man who is not trained as a glass-bottle hand. It seems obvious that we should encourage all the "power" which tends to increase pride in craft skill.

4. Is it because so many "instincts" are thwarted by modern machine industry; do all these instincts cry out together for "power?"

5. Is there more in the old claim than has yet been recognized, that the worker wants to be treated as a man, not as a "hand?"

6. How far is it an expression of an inferiority complex?

7. Is it to improve status?

8. How far is it a reaction against officialism or the abuses of officialism?

9. Does the worker want to accumulate power to use in the struggle between capital and labor?

10. Is the worker trying to get power without responsibility, those two which can never be divorced? I have seen it stated: "Labor wants wages, hours and security without financial responsibility but with power enough to command respect." How naïve. Many of us would like power without responsibility! Is that possible, or is it the old story of eating and having your cake?

11. Is it that the most fundamental thing in man is his "urge" to self-expression and self-determination, combined with his ever seeking the larger, the more complete? Are these twin impulses at the heart of his being perhaps the chief reason for the workers' demand for power?

You can probably think of other reasons, I have put these eleven down quickly. Let us spend the rest of the hour on this point, considering especially those two expressions which we hear daily, the delegation of power and the balance of power.

In the literature on employee representation, we read much of the delegation of power. Myers tells us that the power of the Works Committee is "delegated," that the Board of Directors or the stockholders have the ultimate authority. The Nunn, Bush & Weldon Shoe Co. say that they have "delegated" to their employees the power of fixing wages and hours of work and the right to discharge. I read again, "Authority must be distributed from its source, and filters down through delegation to all parts of business organization." Power must be distributed from its source? Very well, but what is the source? A workman in a factory I was visiting said to me, "Who do you think is the boss here?" It seemed, he said, difficult to discover him. "Is it the Manager of the Works," he asked, "or is it the President? But these are responsible to the Directors. Is it

then the Directors? But they are responsible to the people. Is it then the people?" I tried to find out what he meant by the people, but he was rather vague about that. This interested me, however, because I had not thought I should find the old question of sovereignty, which I had struggled with in political and legal science, cropping up in modern industrial organization in such direct manner. The only legitimate boss, sovereignty, is, I believe, the interweaving experience of all those who are performing some functional part of the activity under consideration.

I do not think that power can be delegated because I believe that genuine power is capacity. To confer power on the workers may be an empty gesture. The main problem of the workers is by no means how much control they can wrest from capital or management, often as we hear that stated; that would be a merely nominal authority and would slip quickly from their grasp. Their problem is how much power they can themselves grow. The matter of workers' control which is so often thought of as a matter of how much the managers will be willing to give up, is really as much a matter for the workers, how much they will be able to assume; where the managers come in is that they should give the workers a chance to grow capacity or power for themselves.

There are many ways in which power develops naturally if there is no hindrance. I wish you would give me some instances. Let me give this as an illustration. We often think of the development of large-scale industry as limiting the individual's opportunity for managing. In some ways this is not true. Take, for instance, what is called "the instinct for workmanship." Formerly, in the time of individual production, this "instinct" was expressed in the individual's own work. Now that individual production has given way to group production, this "instinct" cannot be expressed unless the individual workman has something to say about group organization and the technique of group production. This seems to me a natural development of genuine power.

It is true indeed that the workmen cannot have anything to say about the technique of group production, about group organization, without the coöperation or even the initiative of management; but there is something here which is not covered by the word "delegation."

One thing should be borne in mind beyond anything else in the consideration of this subject, and that is that you should never give authority faster than you can develop methods for the worker taking responsibility for that authority. We may find also that we should not give workers authority without some corresponding stake in the business. In a certain store which has a form of profit-sharing, the employees voted one December not to open the store on the day after Christmas, after taking into account the number of people likely to come out on that day against the expenses of operation. But in the case of another holiday when the same question came up, thinking that this time there would be no appreciable effect on the numbers of people shopping, they voted to open. They had the "power" in both cases, and if that "power" had been divorced from a stake in the business they would probably have voted in both cases to close the store. Interest, responsibility, power,—perhaps here is an indissoluble partnership. Of course in a case like this the responsibility may have been enough without the stake in the business. What do you think?

We have an unfortunate precedent in the use of such phrases as the delegation of power, etc. Many writers on government say that the power of the state should be *divided* among various groups; many tell us that power should be *transferred* from one group to another; many that it should be *conferred* on the smaller nations. Hence it has been natural for many economists who write of something they call "industrial democracy" to tell us that the power now held by owners and managers should be *shared* by the workmen. These expressions, while containing indeed a partial truth, nevertheless at the same time *hide* an important truth, namely, that power is self-developing capacity. This fact is hidden by that expression which has become a pet phrase of the guild socialists, "encroaching control." Divided or conferred authority is non-psychological authority; "encroaching control" is not a genuine control. Power is not a preëxisting thing which can be handed out to someone, or wrenched from someone. We have seen again and again the failure of "power" conferred. You could give me dozens of cases. The division of power is not the thing to be considered, but that method of organization which will generate power. The moral right to an authority which has not been psycho-

logically developed, which is not an expression of capacity, is an empty ethics. This applies to management as well as to workers. We have always to study in a plant how far the authority of the management is real, how far it comes from fufilling function, from knowledge and ability, and how far it is a nominal or an arbitrary authority.

The difficulty of the political scientists quoted in the above paragraph is that they are confusing power and authority. To confer authority where capacity has not been developed is fatal to both government and business. Those political scientists who use the words power, control and authority as synonymous, are confusing our thinking.

If you want the best philosophical as well as the best psychological principle by which to test the legitimacy of "power" (by which you probably mean authority), you will ask whether it is integral to the process or outside the process, that is, whether, as we have said, it grows out of the actual circumstances, whether it is inherent in the situation. You cannot confer power because power is the blossoming of experience. I think a non-understanding of this is the limitation of an article on *Authority* by Ludwig Stein which came out in the September "Atlantic" and was a good deal talked about by business men. Professor Stein says: "That the Bolsheviki had to substitute for the dictatorship from above one from below is a classical example for the sociology of authority." And again, later on: "The fact that old authorities are overthrown only to permit new ones to be created in their stead irresistibly forces the conclusion that authority represents a social-psychological necessity." It does not force me to that conclusion, but to the conclusion that we shall always be seeking an external, an arbitrary authority until we learn to direct our efforts toward seeking—the law of the situation.

There is something in regard to an authority which is not the recognized law of the situation which we should not fail to note in passing, and that is, that an arbitrary authority may rouse very disagreeable reactions. These not only make things difficult for you, but actually reduce your power. Charles Francis Adams used to say: "Increase powers and you decrease power." And only the other day I heard it said that commissions with mandatory powers have less power than those with advisory powers because they put people's backs up. All this is worth consideration.

And we must not omit to mention that most common of fallacies, that when we join with others we deliberately give up a part of our "power," as it is called, in order to get certain privileges which will issue from the union. When a grower signs a coöperative contract, he is supposed to give up a certain amount of "power." Does he? His marketing capacity is certainly increased by his joining with others. The delusion of the "independent" farmer is now exposed to all. Take again the notion of the sacrifice of sovereignty, that each nation must sacrifice a part of its sovereignty for the sake of the benefits which will come from a League of Nations. This is the rationalization of the sentimentalist. No nation intends to sacrifice anything; when a nation sees that it is to its interest to become a part of the League of Nations it will do so. Sovereignties must be joined, not sacrificed. We find this fallacy expressed in regard to business administration by those writers who tell us that the manufacturer ought to surrender a part of his power in order to gain a spirit of contentment in the factory.

As a summing up of this question of conferring or sharing power, I should say that if we have any power, any genuine power, let us hold on to it, let us not give it away. We could not anyway if we wanted to. We can confer authority; but power or capacity, no man can give or take. The manager cannot share *his* power with division superintendent or foreman or workmen, but he can give them opportunities for developing *their* power. Functions may have to be redistributed; something the manager does now had better perhaps be left to a division superintendent, to a foreman, even to a workman; but that is a different matter; let us not confuse the two things. Indeed one of the aims of that very redistribution of function should be how it can serve to evolve more power—more power to turn the wheels. More power, not division of power, should always be our aim; more power for the best possible furtherance of that activity, whatever it may be, to which we are giving our life.

I began this section by saying that we would spend the rest of our hour discussing the delegation of power and the balance of power. It almost seems as if our conclusions last week in regard to joint power did away automatically with the conception of balance of power; yet no conception is more widely held. A labor leader said a few years

ago: "We must give up each trying to wrest power from the other side;" so far a very good idea, but he added, "and find an absolute balance of power." He had no notion of a unit of power. I do not think the balance of power will get labor much further than a domination of power.

Myers evidently believes in the balance of power between workers and executives, as do many others (I mention him because his book is so recent). So does Professor Commons, who in speaking of the desired equilibrium between capital and labor says: "If one is suppressed the other becomes dictator." Certainly, but it seems to me that there is a way out of the difficulty other than the one indicated by Professor Commons.

Many people make coördination and balance synonymous, which seems to me a mistake. The guild socialists do this. Their coördinating congress, they tell us, is an arbitrator or court of appeal to keep the balance of power between coördinate autonomies. This is surely poor philosophy and the religion of the fearful; they are so afraid of power that they say: "Let us all have equal power." I think the aim of coördination should be the building up of a functional total. I think we may learn that a jointly developing power means the possibility of creating new values, a wholly different process from the sterile one of balancing. Not to rearrange existing values, but to bring more into existence is the high mission of enlightened human intercourse.

I began my talk this evening by asking: "What is the determinant of value?"—surely the most important consideration for business administration whether we are speaking of value of services or what not. Most labor men tell us that value is, or should be, determined by collective bargaining. Many business men say that value should be determined by scientific methods which will do away with collective bargaining. But trade unionists do not want to do away with, or even to narrow the field of, collective bargaining, they want to bargain over everything. They have bargained over wages and hours; now many of them say that they should have the opportunity of bargaining over changes in the technique of industry, since these involve changes in the working conditions. If you tell them that

industrial technique is a purely scientific matter, then they reply: "It is never the question alone of the advantage of a new method; but of who is going to get the advantage? If the worker is to get his share that must be bargained for."

This is true as far as it goes. Bargaining is at present necessary, and the result of bargaining rests on the relative strength of the two sides. If we are studying any particular industrial controversy, one of the first steps is to seek the sources of power of the moment. We ask, "What are the general conditions which give to capital or labor the greater economic power of the moment?" Unemployment gives power to the employer; also lack of education among the workmen; also the fact that the employees are not in a position to wait. On the other hand, the power of the workers is reinforced by the strength of the unions back of them, and their strength has increased with the number of unions and the numbers in them.

It is true, therefore, as things are now, that everything should be done to reduce the inequalities in the bargaining power of labor and capital, but I think at the same time we should see beyond that, that our ultimate aim should be different. I do not think this the final secret of solving the problems of business administration. Professor Commons says: "Unless the laborer can speak as a representative of associated laborers, he cannot speak with equal power." While I believe in encouraging employee associations, while I think it a grave weakness of some systems of employee representation that there is not adequate connection between Works Council and the whole body of workers, still my reason for my very strong advocacy of employee association is not chiefly to bring about equal power, but because this helps us to approach functional unity. I should want to make a "side," not for a fair fight, not for fighting at all, but in order that it shall enrich the whole. If I were a manufacturer I should want to consolidate my workers, not in order to give them greater strength in a fight, but in order that they should, by conscious unity, be a stronger part of my plant and thus strengthen my whole organization. I think we should never forget, what we spoke of at greater length last week, that there are two kinds of "sides." There is all the difference in the world between controversial sides and integrative or contributing sides. I am interested only in the latter. I differ therefore from

those people who say that the greatest fairness to the worker is to give him equal power in the bargaining process. My whole business philosophy is different from this. I think we owe both the worker and ourselves more than that.

I trust that the difference between this "equal power," so much talked of, and the power-with we have been considering, is evident. Equal power means the stage set for a fair fight, power-with is a jointly developing power, the aim, a unifying which, while allowing for infinite differing, does away with fighting. When the Sheffield Shop Stewards said, "We organize for power," did they mean power-over, equal power, or power-with? The history of the Shop Stewards movement in England is sufficient answer to this question.

Yet I do not want to be misunderstood on the matter of collective bargaining. It is of course necessary at present; without it both wages and working conditions would fall below even minimum standards.[2] And of course if we do have bargaining we should give the two sides equal advantage as far as possible. I am trying to say merely that I think it is wise to decide, before we begin on any reorganization of our business, whether we believe in collective bargaining as an *ultimate* aim, or whether we accept it for the moment and surround it with the fairest conditions we are able to, at the same time trying to make our reorganization plan look toward a functional unity which, if it does not abolish collective bargaining (it may not) still will give to it a different meaning from that which it has at present. The best point about collective bargaining is that it rests on conference and agreement (there are methods of adjustment, as arbitration, which do not), but I believe in conference not as an episode of war, but as one of the necessary activities in the process I have called a functional unifying. Would not the unqualified acceptance of collective bargaining as now generally understood commit us to the view that industry must remain at the mercy of shifts in "power" from employer to workman, from workman to employer? And is there any hope for a steady and wholesome progress with that condition of things?

[2] Moreover, I should not include in an objectionable kind of collective bargaining all of the present "agreements" between capital and labor, some of which are arrived at by a different process than that of bargaining alone.

But I am aware that we have begun on what ought to be another talk, and must therefore end rather abruptly. Should collective bargaining, we asked, be the determinant of value? Not forever, I think; certainly not in the narrower meaning of that term. It seems to me that value is an interweaving, and that the clever business administrator must know both the strands and the pattern they make.

XIII

BASIC PRINCIPLES OF ADMINISTRATION AND OF MANAGEMENT: THE MANAGEMENT MOVEMENT

By Harlow S. Person

It is only recently that we have begun to hear the expression "the management movement." That its use is so recent does not indicate that management is something new. Management has existed from the beginning of enterprise. The expression does indicate, however, that consciousness of management as an industrial problem and especially conscious effort to resolve the problem are something new. The question why it is only recently that management has become a problem sufficiently urgent to generate a "movement" looking towards better management of enterprise requires us to take a passing glance at American industrial history.

The characteristic feature of that history to which I want to call attention tonight is that we have been pioneers, and that we have pioneered under extraordinary conditions.[1] About a century ago four great masses of energy had come to be in juxtaposition in the United States: (1) a people highly selected as to intelligence, inventiveness, energy and boldness; (2) an individualistic philosophy possessing this people which impelled each individual to utilize to the utmost his own abilities and other facilities at his command; (3) an unexploited territory vast and rich beyond the dreams of explorers in the material elements of human welfare; (4) and a new, powerful technical equipment for the conversion of material resources to human use in the steam engine and other mechanical inventions. The combined energy of these four great energies was something immeasurably greater than the sum of the four.

[1] See my *Shaping Your Management to Meet Developing Industrial Conditions* in "Bulletin of the Taylor Society," VII, No. 6, December, 1922; also E. A. Filene, *The Way Out*, p. 34–40; New York (Doubleday, Page & Company), 1924.

The industrial history of the United States has been since that time the story of the discovery, exploration, appropriation and exploitation of vast natural resources by an energetic people utilizing powerful equipment. It was the pioneering of individuals, each pioneering for himself; there was no common long-run objective, no unified direction and control.

Now it is characteristic of this pioneering that it could be and was technically wasteful and individually profitable. It made profits for the individual, but it habituated us to wasteful methods.

> In the pioneer conquest of this continent the pioneer didn't use fertilizer because it was cheaper to move to new acreage when the old soil was depleted. He didn't pick a tree clean of its fruits or its nuts; it was simpler to move to the next tree and pick from the easily accessible lower branches only. He didn't conserve the buffalo and other game; the game supply seemed inexhaustible. Exploitation was actually cheaper than conservation. *The paradox of pioneering is that, for the industrial pioneer waste is economical.*[2]

We did not deliberately choose wasteful methods; we did not consciously choose any method. We simply followed the line of least resistance. We naturally followed a way which was most profitable to us as individuals; unintentionally we formed wasteful habits and developed a mental attitude tolerant of waste.

There were other characteristics of frontier industry which we should bring to mind. The unit of enterprise was small. It was generally an individual owner, or a small partnership group. There were no problems of large aggregations of people either in the shop or in the community. There was division of labor, but of a simpler form than that we now know. There was more craftsmanship than machine industry. There were no problems of organization and routine. There was banking and credit, but no dominating financial centers. There was no complicated delicate industrial machine. Ownership, management and workers were not widely separated, relationships were personal. There was no problem of industrial relations.

Selling was a relatively simple operation. There was always the old world as a market for our most important raw materials and food-

[2] E. A. Filene, *op. cit.*, p. 36; italics mine.

stuffs; immigration brought an increasing quantity of productive capacity quickly converted into domestic demand capacity. There was only moderate competition; pioneer industrial enterprises generally had their markets to themselves. There was no need for market analysis. It was a continuing sellers' market and there was no need for forecasting tendencies or measuring future demand. A market could be assumed.

Such were the dominant characteristics of American industry down to a period within the memory of those of us of middle age. I imagine some lecturer a hundred years hence, considering the characteristics of early American industry as I am now doing, will say that in 1925 frontier industry was only in its prime. But every appraisal is a matter of perspective, and from our perspective profound changes in industry have been taking place with accelerating rapidity since the eighties. Environment has changed more rapidly than mental attitudes and habits, and the effort to change mental attitudes and habits to match the problems created by the new environment has, with respect to the conduct of industry, brought about what we call "the management movement."

In the last decades of the last century American industry as a result of accelerated development of transportation and communication reached its last frontier—geographically. There were left other frontiers—of social organization and of habits of thought; but to have reached the last frontier geographically was of momentous consequence. It meant that in industry frontier methods could no longer suffice. Industry is concerned primarily with converting nature's resources to human use; natural resources are a phenomenon of territory; therefore limitation of unexploited territory forced revision of the technique of industry.

American industry reached its last frontier in a double sense. In the first place, the successive waves of settlement reached the Pacific and could go no farther. There was no more territory to explore, to preëmpt and exploit. The significance of this is not that all this territory was filled with population, for it was not; the significance is that it was preëmpted and valued—became property. This profoundly influenced individual opportunity and individual enterprise. It removed from individual enterprise the opportunity for the earlier

kind of discovery and prëemption. Thereafter to secure resources for enterprise the individual had to invest.

One effect of this was to throw many individuals, who could have preëmpted but could not invest, back upon the industry of the more developed regions of the eastern part of the county. Another effect, upon those who could invest, was to bring some appreciation of the value of property and of the cost of waste.

> But when the last frontier was reached the pioneer had to change his methods or become a personal failure or social liability. When there were no more new lands to preëmpt, the old had to be fertilized. When fruits and nuts were no longer to be had just for the picking, orchards had to be planted and protected, and every tree had to be carefully picked. When the end of the game supply was in sight, game laws had to be drafted for its conservation, and cattle herds created and maintained.[3]

The other sense in which territorially American industry had reached its last frontier was the filling up in the eastern part of the country of the less favorable unsettled areas which had been left by earlier westward waves of settlement, and the consolidation of local industrial markets into one national—in some respects an international—market. The small manufacturer, for instance, who had been dominant in a local market suddenly found himself in a new and very much larger market, and confronted by competitors who, like himself, had previously been limited to local markets in which they had been dominant. A new stage was set; a stage for competition between individual capacities on a new scale, with vastly larger resources, big stakes to play for, and frontier rules of the game which placed few limitations upon the individual. In the seventies and eighties the stage was set for big-scale industry as we now know it. The actors were ready—the intelligent, inventive and bold American, made keener, more inventive and bolder by years of frontier experience—and the drama developed with rapidity.

The circular response between demand and its supply accelerated. On the side of demand markets were extended and consolidated by the development of land and marine transportation. Raw materials and food stuffs became cash crops in an increasing foreign trade, and this immediately available income plus discounted future income created

[3] E. A. Filene, *op. cit.*, p. 37.

a great domestic market which became a sustained sellers' market. Mass selling became possible to the individual with vision, initiative and ability to manage big operations and with the materials and equipment necessary for big operations.

The market for securing raw materials was extended and consolidated in similar degree. The individual enterprise was no longer limited to the raw materials of its immediate territory. It became possible to secure raw materials in mass to support mass selling. Mass utilization of materials stimulated inventiveness in the combining of materials and in economical mass handling of materials.

Equipment, not only for the handling but also for the conversion of materials, increased at a rate which met the new opportunity for its utilization. Machinery from one point of view is a specialized form of capital—the stored-up energy of earlier productivity. From another, a technical point of view, it is a device for capturing and utilizing great energies of nature in conjunction with the energies of man. It makes possible economical mass production. During the period under consideration the rapidly mounting income and the untouched resources of the United States served as a security for making immediately available the capital saved by western Europe's older civilization, and the inventiveness of the American gave it the essential specialized technical form.

Labor became available in abundance. The incentive to natural increase was at a maximum, but the quantity of labor was not dependent upon that. The productivity of American industry translated into wages and standard of living, in contrast to the wages and standard of living of Europe, stimulated a great migration westward across the Atlantic. Although from the point of view of individual craftsmanship its quality declined, it met the requirements of a rapidly developing specialized-machine industry.

With the development of large-scale industry there came an important change in technical organization—perhaps not a change in quality but a quantitative change so great as to amount practically to a change in quality. I refer to a more extensive and intensive utilization of the division of labor. This was manifested in two ways: first, within the individual enterprise labor became specialized—in place of the all-round machinist there appeared the lathe, grinder or boring-

mill operative; and second, specialization set in as between enterprises—for example, one enterprise breeding cattle, another stall-feeding and fattening, another slaughtering, another tanning leather, another making findings for shoes and still another making the shoes, and this latter enterprise specializing in men's shoes or women's shoes.

During this period also there came into general use a form of organization—legal rather than technical, but carrying nevertheless many technical advantages—which promoted the rapid development of large-scale industry. This was the corporation. Its particular technical advantage was that it facilitated the bringing together of capital from many sources for application as one common fund to any particular large-scale enterprise. Another technical advantage was that it lent itself to centralized control and offered a powerful instrument of competition to able enterprisers who carried over into a more complicated social organization the individualistic impulses of the frontier period.

Thus the stream of energy in American industry rapidly became enlarged. There developed an industrial régime characterized by demand in mass, materials in mass, capital in free and specialized forms in mass, workers in abundance, and by a sufficient number of keen, inventive, venturesome individuals to assume the leadership of working out a technique of managing or manipulating these mass energies. From 1880 on developed the golden age of individualistic, large-scale enterprise in the United States.

Yet it was during this period of extraordinary achievement and prosperity that we find the beginnings of "the management movement," the beginnings of a realization that, even on a sellers' market, the conduct of enterprise has serious problems.[4] Looking backward at this industrial revolution in the large from our viewpoint of 1925, we get the impression of a change which, although enormous in its proportions, was in its outlines simple and inevitable. But we must

[4] A list of references on management prepared by the New York Public Library in 1917 shows the following: No American titles prior to 1881; 11 titles in the seventeen years from 1881 to 1897; 16 titles in the three years from 1897 to 1899; 240 titles in the ten years from 1900 to 1909. From 1910 on the titles increase rapidly.

realize that it was the sum of the solutions of an infinite number of varying individual problems. From the point of view of the individual enterpriser of that day, it was a succession of new concrete situations and problems, new to his experience and having no part, so far as he could see, in any grand social development. During the war some of us had large maps of the line of battle in France and marked with thumb tacks the results of military operations. The strategy seemed to us—from afar and at a later moment—so simple, so obvious. We probably failed to realize that to the soldier and sergeant in the trenches, to the captain and the colonel, perhaps to officers of larger responsibilities, it was the local situation, the local problems, the succession of local unexpected things which filled the range of vision. I must remind you of what Professor Carver said to you about wealth not being a social product—except in a Pickwickian sense; it is a product of individual workers, individual foremen, individual managers, individual enterprisers at their individual coördinating and coördinated tasks.

In the new order created by this industrial revolution of the eighties and nineties a greater freedom and opportunity was found by certain individual enterprisers of great natural ability, imagination and boldness in taking a chance, supported perhaps by a certain frontier-developed social lawlessness. They set the pace, became the captains of industry. They had the nerve to continue and get away with the technique of exploration, appropriation and exploitation pertinent to frontier industry, after the geographical frontiers had disappeared. They discovered new frontiers—as in the opportunity for exploitation presented by corporate organization and a new scale of pecuniary valuation. A Gould, Hill, Harriman, Rockefeller, Morgan or Schwab is essentially a frontiersman. But the great majority of enterprisers did not find in this industrial revolution a new freedom and opportunity of that kind. To be sure, from our 1925 point of view, it was a grand sellers' market, and enterprisers today would consider it a great freedom if they could again have such a market; but from the point of view of the majority of enterprisers of say 1890 to 1900, there was a sense of accumulating uncertainties and limitations to which they had not been accustomed. What were some of these limitations? Let us find them in the story of the Smiths, father and son, and Jones.

Back in 1840 John Smith 1st had settled in a small Michigan village and started a blacksmith-wheelwright enterprise which gradually expanded into a small carriage manufacturing enterprise. He came to hire fifteen to twenty workers. They were all-round skilled men with pride in craftsmanship. There was no system and a minimum of supervision. The owner simply worked with his men. The market was a local one, but expanding with increasing population. The men made good wages for the period; the owner made a good wage and some contingent profit. But the owner's wealth increased steadily—so the tax assessors certified. He was receiving the benefit of what some call "unearned increment," what others might call "pioneer's profits." That interested him more than income from profits of operation. He was an industrial pioneer.

He died in 1870 and John Smith 2d succeeded to a valuable small enterprise. With the building of railroads in the seventies and eighties the regional population increased steadily, the village became an important agricultural market, and the business of manufacturing carriages and wagons thrived. John Smith 2d came to employ a hundred workers. While John Smith 2d did not work alongside his people as his father had done—he had too much "business" to attend to—he knew them personally. He made a better contingent income from operations than this father; but nevertheless he, like his father, enjoyed an increase of wealth from the pioneer's income. He like his father was not seriously concerned with operating profits and problems of management.

Then in the nineties William Jones came over from Detroit and proposed to purchase the business. Jones had been a salesman for a jobber handling iron, wood and other wagon manufacturing supplies. He knew Smith's business, saw a future in it, had some money of his own to invest and knew some Detroit parties he could interest. The sale was made at a good price, and John Smith 2d retired. Jones organized a corporation, took about 25 per cent of the stock and disposed of the other 75 per cent to Detroit capitalists who had become wealthy from "pioneering" in Michigan forests and iron mines.

Now Jones is the manager who began to feel the limitations imposed by the industrial revolution which had set in. Like the two Smiths he could expect to receive, and did receive, some pioneer's income

from increased population and demand in his immediate market. But it was not the sort of income with which to pay dividends. His backers were willing to a certain extent to look upon the enterprise as an investment in the future, but the business must be so operated as to show some current income from operations which would permit moderate dividends at least. Jones found himself up against a problem of technical management in a capitalistic régime.

First, he realized that he was feeling competition from several sources. A well-established firm in Toledo was reaching into his territory—also one in Detroit, one in South Bend and one in Chicago. Among them there were advantages which led to reduced price lists. That big concern in Toledo was particularly bothersome. They seemed to have the idea that if they should reduce prices and get a lot of business, they could make money by cheaper production per unit of large quantities quickly turned.

Jones did a lot of worrying and some figuring. His materials were costing more rather than less. He was on the northern edge of the hard wood belt and had exhausted the supply of hickory and ash nearby. The iron and steel center was becoming concentrated in the Pittsburgh region and the nearby Michigan furnaces were shutting down. His labor costs were increasing rather than decreasing. The older craftsman were dying off and inferior craftsmen were coming in. Generally in the United States there was plenty of labor, yet wages were not decreasing. He couldn't cut his prime costs. He might do so were he to equip with some of that new improved machinery, but that meant additional investment, larger scale production, larger sales. He doubted whether his location favored that. Then he had an overhead to consider—something about which the pioneering Smiths had had no concern. He and his stockholders had paid cold cash for the enterprise. The capital investment had to be kept intact and its use paid for. Also the village, county and state were improving roads, building schools, and incurring other expenses. That meant a mounting item of taxes in his overhead. He was having to hire more of what he considered non-productive labor—stenographers and clerks. Finally selling costs were increasing. He could no longer assume a market, he had to send men out to get orders away from the competitors. Even advertising might be necessary. After consider-

ing all these facts he decided to recommend that they sell out to the Toledo people. That was done, and fortunately the original investment with a small profit was realized. Jones went down to the big Toledo plant as one of the managers in a large organization.

The industrial revolution had complicated the situation for the small enterprises which had been thrust from a small market without competition into a larger regional or national market with competition. The Bill Jones who remained in business began to lie awake nights—because of the problems of management. But what about our Bill Jones who went to the Toledo plant?

Somehow the big plant seemed to have a lot of troubles of its own. It may have beat Jones in his Michigan market, but in other markets it was feeling the competition of other big plants and in some instances of favorably located and well-managed small plants. That new automobile industry was beginning to be a nuisance to the carriage and wagon industry. The selling prices which had been reduced tended to go down still further. Selling costs were mounting. A depression or two and seasonal variations in demand were troublesome and costly. The nominal owners and the effective owners were no longer the same; the effective owners were primarily financiers and they established policies which had a financial rather than an operating bias. They wanted dividends and good quotations on the stock. Overhead was high and tended to mount; managers increased in number, "non-productive" clerical workers increased, taxes increased, plant maintenance became more costly with the extension of plant and the addition of new equipment. Even production costs refused to be reduced as much as had been expected; somehow it became more difficult to prevent waste of materials, machine hours and labor hours as the plant became larger. This task of directing large-scale operations did not prove to be so easy. Materials failed to arrive at the plant on time; materials in the plant failed to get to the machines on time. In some departments work jammed up like an ice jam; in others there was not enough to keep men and machines busy. Workers were becoming more independent; sometimes they seemed to have a grouch and slowed up in production; they were employees, not personal friends; they seemed to have more interest in a trade union than in the plant itself. By strength of the union they even forced increase of wages. No; big-scale operations were not simple and easy.

Increase these inadequate and somewhat anachronistic hypothetical cases by thousands of other cases, each with its individual variations, and you have the industrial situation in which "the management movement" had its beginnings. The managers of that period began to realize that management is a problem; they began to talk their problems over one with another; some of them began to read papers on the subject before associations the organization of which this very environment was stimulating; certain magazines saw the opportunity for increase of circulation by publishing articles to satisfy this new interest.

Industry was beginning—only beginning—to sense the fact that under the conditions which were developing, the wasteful way was no longer generally the individually profitable way.

It is interesting to note, however, that the first coherent public expression of concern with management problems came from the engineers. They were the initiators of "the management movement." And it was they who continued to give it vigor. The average "self-made" enterpriser has scarcely yet taken a great interest in serious study of the management problem. His mental attitude and his methods are generally still those of the pioneer. The first highly trained minds to go into industry were products of the engineering schools. They were trained as technicians and went into industry as technicians, but many of them speedily became operating executives and focused their trained minds on managerial problems. In recent years graduates of arts colleges and of schools of commerce have gone into industry and have played their part in the development of the management movement. The so-called self-made manager has been less responsive to this interest. It appears that "the management movement" arose out of the impact of a group of highly trained engineering minds on an industrial situation of engineering complexity. The "management movement" was a response to such a need as is expressed in the following words of one of those exceptional self-trained minds which is the equal of any university product:

> We are now living in a world in which the reckless and wasteful methods of the exploiter are a social menace and the creative methods of the scientific, socially minded business man a necessity. The business man of yesterday could get along

very well with the pioneer virtues and pioneer practices. The business man of tomorrow must have the engineer-mind and be guided by the vision of economic statesmanship. . . . . As society develops the pioneer must always be succeeded by the engineer and the statesman. . . . . Only a broader and more scientific approach will enable the business man of the future to survive. . . . . We would better turn our energies to the urgent job of substituting the engineer-mind for the pioneer-mind in the American business of the future.[5]

At its beginning in the eighties the literature of the management movement is found almost exclusively in engineering publications, and during the nineties most of it is found in those publications.[6]

An examination of the early titles—those of the eighties and nineties—shows that the first management problem to engage attention was that of wages, or rather, of wage systems. The first particular management problem emphasized by the industrial revolution which I have described, was the labor problem in its efficiency aspects. The point of view was not that of today. Finding that in the larger plants they were losing the power of direct supervision, managers sought for some substitute incentive. They thought naturally in terms of a wage incentive which would inspire to effort the worker who was under less direct and constant supervision. So their discussions were of such things as piece rates, premium systems, task and bonus.

The next subject to engage attention was that of costs and cost systems. This was an advance over the first attack on the management problem in this respect; attempt to solve their problem through wage devices was really putting the solution up to the workers; attempt to solve it by better cost systems was placing the responsibility where it belonged—on management. Also it was the beginning of a new method—an analytic attack on the problem.

During the ten years beginning in 1900 a third phase of interest appeared in the movement; interest in organization and "system." This was a further placing of responsibility on the management itself. I have not made a study sufficient to justify the following as a proved fact, but I present it as a reasonable hypothesis; the analytic attack on

[5] e.g. Filene, p. 36, 37, 39.

[6] e.g. Transactions of the A. S. M. E.; "The Engineering Magazine;" "The American Machinist;" etc.

the management problem through the study of costs had brought realization of the relation of good organization and system to efficient coördination. Management was beginning to appreciate, though in an elementary way, the essence of its problem—coördination and regularization within the shop.

I shall not now trace further the development of the management movement, for about 1911 it was revolutionized by the concept of scientific management, and that is reserved as the subject of the next lecture.

The industrial conditions generated by the World War have had a profound influence on the management movement. Industry as a whole experienced shocking maladjustments and was thrown suddenly upon a buyers' market. As a result, in the first place, the emphasis of management interest was transferred to management of selling, although it is now gradually being brought back to production as establishing favorable conditions of competitive selling. In the second place it increased the interest in the problem of industrial relations; for labor has become relatively scarce and there is a new philosophy of human relations abroad in the world. In the third place, it increased the interest in the function of general administration—the determination and formulation of long-run policies and plans—and in the function of general management—the establishment of master plans and schedules of operation which go a long way towards solving detail problems of operation. These also will be matters for consideration in following lectures. Altogether the movement has become broader and more scientific in its nature.

XIV

BASIC PRINCIPLES OF ADMINISTRATION AND OF MANAGEMENT: SCIENTIFIC MANAGEMENT

By Harlow S. Person

The management movement, the object of our attention two weeks ago, and scientific management, the object of our attention this evening, are distinct movements. It is true that in recent years scientific management has profoundly influenced the management movement; has served as an agent to precipitate vague desires and unrelated efforts into a definite technique, body of principles and management philosophy; nevertheless, for a quarter of a century scientific management existed and remained unknown to most of those whose strivings constituted the management movement. Although in origin a set of generalizations, from a mass of facts accumulated by one man in the successful solution of a series of practical managerial problems, the scientific management concept at first gave the impression of being a purely intellectual[1] or theoretical contribution to industry and made little appeal to executives who were proud of their "practicality;" in fact, it at first made little appeal to the then most highly trained and scientific group in industry, the group in which it had its origin: the engineers.

In 1872 the youth Frederick Taylor entered Phillips Exeter Academy to prepare for Harvard and the career of law. He worked hard, led his class and within a year and a half passed the Harvard entrance examinations with honors. But it was at the cost of seriously impaired eyesight, and the idea of further study had to be abandoned. He went home to Philadelphia, to a well-to-do-family where he could have assumed the easy life of a semi-invalid, but instead, at

[1] Charles de Freminville, the eminent French engineer, has pointed out that scientific management was a discovery resulting from an intellectualist's excursion into industry. "Bulletin of the Taylor Society," X, No. 1, February, 1925.

the age of eighteen he got a job in a machine shop where for several years he served the apprenticeships of machinist and pattern-maker. In 1878, at the age of twenty-two, he went to the Midvale Steel Works—at first as ordinary laborer, for the times were bad and machinists were not in demand. He earned rapid promotion; time clerk, journeyman lathe hand, gang boss when not yet quite twenty-three, foreman of the machine shop, informally chief engineer at twenty-eight, and formally chief engineer at thirty-one.

As Copley says:[2]

> Going to Midvale when he was twenty-two and leaving there when he was thirty-four, he packed into those twelve years of his young manhood an aggregate of achievements which, without exaggeration, can be called exceptional. While he was acquiring the expertness at tennis that enabled him to win with Clark the doubles championship of the United States in 1881, he had begun the study at night that qualified him for the degree of M.E. he obtained at Stevens in 1883. From 1878 on to about 1881 he resorted to every method he could think of to force his men to increase their production; then came his time-study, metal-cutting, and belting investigations, and the years of wearing struggle to build up a system and develop an organization that would facilitate the establishment and maintenance of his scientifically determined standards. In the meantime he met the claims of friendship, won a wife, and established a home of his own. In 1883 and 1884 he designed and superintended the construction of a new machine shop having many novel features. In 1886, two years after his marriage, he joined the A. S. M. E., became an attentive student of its papers, and prepared one of his own (on the use of gas in open-hearth furnaces). As a master mechanic and chief engineer he became responsible for all repairs and maintenances throughout the works. And all along he poured out his ingenuity in the invention, not only of management devices, but of purely mechanical; this latter form culminating in the designing, apparently in the latter part of 1889, of his great and revolutionary steam hammer.
>
> But the most remarkable part of it is this; . . . . he developed, *single-handed*, a system of shop management the like of which never had been known before, and despite the opposition his radically new ways were bound to arouse, put the thing into effect with such success that he brought the entire works around to it.

These extraordinary achievements are not to be explained in an ordinary way. Here was one of those historic instances of a peculiarly endowed young man meeting an opportunity which knocked

[2] *Frederick W. Taylor: Father of Scientific Management* New York (Harper), 1923; I, p. 332, 117.

at his door and found him ready; of an industrial revolution looking for a genius to solve new problems and finding him in this particular young man.

He was unquestionably a genius. He had inherited an exaggerated Puritan-Quaker conscience—to give less than one's best, individually or in coöperation, was to him a crime. He had a passion for service —was always giving and not demanding in return. He had been born a scientist, endowed with a passion for experiment and an aptitude for invention—these had been manifested in incidents of youth and were proved by his subsequent career. He was a non-conformist—never afraid to do the different thing and to fight for it. He was fearless—when convinced a course of action was right he had no regard for the consequences to himself.

Appointed gang boss over a group of men and machines, this mild-appearing, light-haired, blue-eyed, 145 pound, twenty-three-year-old young man started in to get production from a group of mature and hardened machine hands—this was 1880 and the steel industry. He knew production was low; he knew "make work" was systematically practised—he had been a worker himself. He had a bitter fight with the men and eventually won out. But it gave him no satisfaction; it made him bitter against the prevailing methods of foremanship which he had practised. He had followed the customary method of arbitrary exercise of power implied in the word "boss"—and the consequences sickened him. "I was a young man in years," he said later, "but I give you my word I was a great deal older than I am now, what with the worry, meanness and contemptibleness of the whole damn thing. . . . . I made up my mind to either get out . . . . or find some remedy for this unbearable condition."[3]

He did not get out; his scientific temperament, his experimental and inventive faculties, came to his rescue. It is an historic instance of inventiveness achieving integration. He had begun his work as gang boss with emphasis on increase of production, easily secured if every man would do his best. Within a year he had come to see his problem as one of human relations—the workers would not do

[3] Copley, I, 5.

their best because they did not have confidence in the management. Why this lack of confidence? Well, there had been unemployment following the depression of 1873—not enough work to go round. Then there had been that cutting of piece-rates with which workers had had bitter experience. Why had piece-rates been cut? Because they had been carelessly made, and in a period of rapid utilization of new machinery a firm which has established carelessly-made piece-rates in competition with firms paying day or hour rates simply must cut rates or fail. Why were piece-rates carelessly made? Because management did not know anything definite about the capacity of men working at machines—about what constitutes a day's work. Therefore, said the young Taylor, the problem is to find out what a day's work should be, for each particular machine and each particular class of work on it.

So, without consulting his superiors, he established what amounted to a laboratory. He withdrew a man and a machine from regular production, got a lot of scrap metal which happened to be at hand, and they went to work cutting metal just for the purpose of securing data to be analyzed. Variables were noted and controlled—this tension of belt and that tension, this adjustment of machine feeds and speeds and that adjustment, this shape and sharpness of tool and that shape and sharpness, and so on in infinite controlled variety —and careful records were kept and analyzed. In an incredibly short time Taylor discovered that by standardizing all the best unit variables and organizing them into an integral whole the production of any operation could be increased several times without extra effort on the part of workers, and what is more significant, could be depended upon. In all its aspects it was a momentous discovery for industry. First, what a day's work should be could be defined. Second, the best combination of variable elements to make a day's work highly productive could be made a matter of record and of common knowledge. Third, rates could be established which would never have to be cut so long as no change was made in the conditions. Fourth, the higher productivity of a day's work would make possible higher wages to workers and greater profits to enterprises. Fifth, here was a factual basis for understanding and the establishment of harmonious industrial relations—never again did Taylor have

friction with workers under his supervision. Sixth, the most fundamental of all from our perspective of today, the value—immediate and practical—of the scientific method in solving problems of management was demonstrated.

This was the first step, about 1881, in the development of the Taylor System. The second step came, almost simultaneously, in devising a method of utilizing these discoveries throughout the shop. As a matter of common sense it was obvious to the young Taylor that utilization involved the following: making conditions developed at the experimental machine standard for all machines; careful maintenance of the standard conditions; complete understanding by all concerned through general and special instructions; running records of performance to discover and correct promptly lapses in standard conditions and in understanding of instructions; a sharing of the increased productivity through higher wages to serve as one incentive for learning and maintaining a new and more complicated type of coöperative effort. Common sense also told the young Taylor that standard conditions permitting measurable results from measurable efforts would make possible pre-planning and planning to a degree so much greater than had previously been realized as to make it essentially a new thing in management.

Theorizing about these things did not occur to Taylor until years later. At this time he was a young gang boss and foreman solving practical problems of foremanship which came up in rapid succession. His solution of these problems was in general the setting up of the nucleus of the system which later came to be known as the Taylor System. Although including all the essential elements, it was but the outline of the system we now know. The Midvale shop was not large and was engaged in relatively simple operations, such as machining locomotive drive-wheel tires and axles, in which each operation lasted for hours and the machines did most of the work.

From the point of view of its later development to meet more complicated situations, standardization involves the following—all standards being the result of painstaking research and experiment:

Product: Uses; varieties; interchangeability of parts; materials of which made.
Materials: Standardization results from standardization of product.
Plant: In new construction plants are being adapted to the requirements of the business.

Machines: Kinds; uses; adjustments for particular purposes.

Tools: Kinds; uses; composition; characteristics for particular purposes.

Workers: Relating of workers to operations through job analysis, and analysis and classification of workers as to physical and temperamental characteristics and acquired skill.

Methods: Not so much attention given directly to the workers' motions as to conditions which bring economy of motions automatically—clear instructions concerning what is to be done; materials and tools at hand and conveniently located; finished product got out of the way; machines kept in repair.

Times: The other standards having been established, a standard time for an operation may be determined agreeable to workers of the requisite grade of craft skill.

Rates: Given dependable standard times, a basis is established for agreement upon standard rates.

Instructions: Understanding being essential to coöperative effort, all standards are recorded and the records made available to those concerned. The instructions with which most operatives are concerned are those relating to standard times. These instructions giving standard times generally constitute also the instructions with respect to method, as the unit elements of a total operation and their respective times are listed in the order in which they are to be performed. Most detail instruction as to method is given by the forman actually showing the worker how.

The maintenance of standards is assured through inspection of various kinds:

Machines and tools are systematically inspected and kept in the conditions adapted as standard.

Materials are inspected on receipt to determine conformity to specifications based upon standards.

Products—both unit and assembled—are inspected as to conformity to standards of design, workmanship and other aspects of quality.

Performance records are constantly inspected to discover deteriorations in standards which have escaped other forms of inspection, for a decline in a worker's output is usually due to some cause not under the control of the worker. Few people realize that performance records are used for any other purpose than making up the payroll. Their most important use is that of detecting through performance variations deterioration of standard conditions which the workers have a right to assume as maintained.

The third step in the development of the Taylor System came when Taylor took advantage of the possibilities of pre-planning and planning which standardization offered. Logically and essentially this step was taken at Midvale, but it was not taken in a significant way until Taylor went to Bethlehem where he had to supervise a

machine shop half a mile long and turning out a great variety of products.

At Midvale just as fast as Taylor effected standardization and established conditions he could count upon, he gave more attention to laying out work in advance. Standard conditions making it possible to compute the relations of effort and result with reasonable accuracy, it was no longer necessary to wait until the last minute to know when a machine would be off a job and what job could be done next. He began to lay out jobs for machines days in advance. This made possible the elimination of much idle time between jobs. Preparation for one job could be begun before the other was off the machine.

But at Midvale the variety of operations was not great and in general they were of such a nature that machines were busy upon one job for many hours at a time. So such pre-planning and planning as was done, was done by Taylor himself as foreman. It was just an increment added to his foreman's task, and was not so exacting as to call for special attention. At that time the desirability of functionalizing it did not occur to Taylor.

But in the big machine shop at Bethlehem (1898–1901) the situation was a much more complicated one; there was a greater variety and volume of products, a greater number of variety of machines, a greater number of workers of a greater variety of capacities, and necessarily a less intimate contact with each. On the one hand he had to extend his system of determining, establishing and maintaining standards to make it more resistant to accident. On the other hand he had to develop for the first time a real system of getting the best out of standardization, of putting work through in accordance with predetermined plans and schedules.[4] This led to division of responsibility along functional lines and the establishment of the planning room.

[4] What this had come to mean is indicated by the following facts: On December 19, 1924, The Holt Manufacturing Co., Peoria, Ill., had maintained for 789 consecutive working days an exactly scheduled production, schedules being made five months in advance. For a period of over two years, each day delivered a product scheduled five months earlier. This involved scheduling and keeping on schedule over 8,000,000 machine operations. "Bulletin of the Taylor Society," December, 1924, p. 260.

Taylor's analytic mind told him that determining *what* is to be done, *when* it should be done and *how* it should be done, constitute one class of functions, the material of performance being *records;* and that doing the things constitutes another class of functions, the material of performance being craft skill, equipment and materials. *What* is determined by the orders which come in or by a plan of manufacture to stock. *When* is determined by the records of assignment of work to machines, embracing also information as to when machines will be freed for new operations. *How* is determined by the records of investigators and experimenters, expressed in instructions relating to standard conditions, standard set-up of machines, standard materials (kind and quantity) and standard times. So Taylor withdrew certain of his foremen from supervision of work at machines, located them in a corner of the shop partitioned off for the purpose of quiet and cleanliness and systematic preservation of papers, and set them to analyzing orders and pre-planning and planning work. As time came for a planned job to go on a machine, by written orders materials were got to the machine and instructions were sent to the shop foremen and workers concerned. This same group also was given responsibility for the establishment and maintenance of standards and for inspection of performance. The foremen who remained out in the shop supervising operations, having had responsibility for planning transferred from their jurisdiction, now concentrated upon methods of performance and automatically became essentially teachers. The functional foremanship organization which Taylor came to recommend as standard for a machine shop was essentially as follows:

In the planning room

Production clerk: General supervision; concerned with *what and when* in general, and with exceptional situations.

Route clerk: Analysis of an order with respect to the sequence of unit operations and to the *how* of performance.

Time and rate clerks: Concerned with investigation and determination of *how, in what time* and *wage rates* with respect to new operations.

Order-of-work-clerk: Concerned with *when* in detail, issuing unit jobs to machines in accordance with time schedule determined by route clerk.

Progress record and cost clerk: Concerned with current reports of performance—(a) to discover what is not going in accordance with calculations, and (b) to analyze and record costs.

In the shop

Gang boss: Concerned with general supervision—receipt of instructions; materials; emergency situations.

Speed boss: Concerned with correct setting up of machine, in accordance with instructions, at the *beginning of* a job. (Feed adjustments being more important than speed adjustments, he might more properly have been called Feed Boss, which would perhaps have avoided a great deal of unprofitable controversy.)

Inspector: Concerned with inspection of first piece of a lot to determine whether the operator has started right; also with inspection of all pieces after the work on a lot is completed.

Disciplinarian: Concerned with settlement of disputes—the original functionalized personnel manager.

I have now traced the development of and emphasized the outstanding characteristics of the Taylor System: first, investigation of each management problem in a genuinely scientific manner and establishment of a factual basis which eliminates guess; second, the elimination of chance by the establishment and maintenance of standards which permit calculable efforts and results; third, on the basis of conditions which permit calculation of results, careful preplanning and planning of effort with respect to desired results. So great generally are the wastes of guess and of faulty coördination that management in accordance with this system more than doubles productivity of a given amount of human effort of people working together under division of labor.

I have said that Taylor was not a theorizer—that he did not first have a theory about system and then devise a system to express the theory. The historic facts are just the reverse. As gang boss he had a problem and he devised a technique to solve it; as a foreman he had a more complicated problem and he developed his technique to solve it; as engineer he met a still more complicated problem and had to elaborate his technique to solve that. All these extensions were forced by practical problems. Not until later did he rationalize. Consequently, when he did come to rationalize, his generalizations were based on facts of experience.

He joined the A. S. M. E. in 1885 and it was probably that environment which stimulated him to thinking about what his system of managing meant. And he was stimulated in a very practical way—as a result of his observations and experience he didn't agree

with the papers he heard at the A. S. M. E. meetings. In 1886 Henry R. Towne had presented his famous papers, *The Engineer as Economist*, and that undoubtedly impressed Taylor. But for the next ten years the A. S. M. E., the only vocal group in the management movement, centered its attention on methods of wage payment. Taylor didn't agree with that. The important thing to him was not the particular wage system, but whether management knows what it is paying wages for. The important thing is to know what a day's work is and how to get a good day's work; not the particular formula by which payment is made. So in 1895 Taylor wrote a paper which he called *A Piece Rate System* to make it attract attention, but which he intended should present this theory of management. His piece rate system did attract attention, but not his system of management. Then he decided to present his ideas again, and not to use a misleading title. So in 1903 he presented *Shop Management* to the A. S. M. E. This time there was some discussion of his management methods, but it was perfunctory. The discussors practically dismissed it by saying "It can't be done!"—this in the face of Taylor's statement that he had done it. Then in 1910–11 came the Eastern Rate Case Hearings, and Louis Brandeis, attorney for the shippers, put witness after witness on the stand to testify what Taylor management had done in industry. They called it "Scientific Management," a term which attracted attention. One witness testified that by Taylor methods the railroads could save a million dollars a day. For months the papers were full of it, and soon *Shop Management*, which had been perfunctorily discussed and dismissed by the engineers ten years earlier, became a classic in a dozen languages. This spectacular publicity undoubtedly temporarily damaged as much as it helped the scientific management movement; but it did accomplish one important thing; at last after thirty years of practically independent existence, scientific management and the management movement were brought into contact.

Since 1910, and with accelerating influence, the scientific management concept has been to the management movement what the cathode is to the electrolyte. It provided a pole—although not a negative pole—about which elements in the management movement—isolated experiments, devices, ideas—could gather. It offered to

groping industry in its efforts to master the industrial revolution something tangible as to technique and definite as to principles. During fifteen years of controversy precipitated by scientific management in 1910, no other inclusive, consistent and effective technique, and no other logical and coherent body of principles have emerged. That is most significant: Extension of the application of the principles—yes; greater skill in the application—yes; improvement in mechanisms—yes; but that is all, and such improvement is inherent in scientific management's basic principle—the principle of scientific investigation of managerial problems.

In making generalizations Taylor was not skilful. He was primarily a scientist and investigator, secondarily a manager of men, and only remotely third an expounder. But do we not, nevertheless, find explicit and implied in his formulation of principles essentially all that we now consider essential to good management?

1. The development of a true science for each element of work to replace the old rule of thumb methods. This applies to the general manager's task as well as to the artisan's.

2. The scientific selection, assignment, teaching and training of participants in enterprise.

3. The segregation in a specialized group of workers, distinct from workers at machine and bench, of managerial functions concerned with investigation, experiment, analysis of records and coördination.

4. Intimate friendly coöperation between all concerned in the conduct of an enterprise. Even industrial psychology, the most recent phase of the management problem to receive attention, was envisaged by Taylor fifteen years ago in these words: "There is another type of scientific investigation which has been referred to several times in this paper, and which should receive special attention, namely, the accurate study of the motives which influence men."[5]

The Taylor System in Taylor's day was concerned with processing, with the management of the shop. That is the department where most of the workers are. We must remember that from about 1880 until the war we were on a sellers' market and that production was *the* problem. On a sellers' market finance, selling, even the co-

[5] *Principles of Scientific Management*, p. 119.

ordination function of general management, are not as important as processing. But during the war we suffered great dislocation of industry and have since then been on a buyers' market. The problems of general management, of coördination, of selling, of finance, of industrial relations, have come to the front. How has the management movement under the influence of scientific management met these problems? It is my purpose to answer this question in lectures which are to follow. If you cannot wait, read Hunt's little book, *Scientific Management Since Taylor.*

There is one influence of scientific management to which I desire, in conclusion, to give some attention. It has taught us to think about management in terms of functions. Taylor's third principle is concerned with functional division of responsibility—the separation of planning and execution, and the assignment of these responsibilities to different groups of foremen. This suggestion of Taylor's has stimulated industry to analyze its problems more from the point of view of the functions involved. This has led, I believe, to sounder analysis, clearer thinking, more accurate definition of problems, and consequently to more effective solutions of problems.

Now I believe that if we look at enterprise as a whole we find it made up of two major functions, major functions which are present in any purposive activity—in the corner fruit stand as well as the United States Steel Corporation. These are Administration and Management.

By Administration I mean the responsibility for determination of the purpose of the enterprise, of general policies to accomplish that purpose and of general plans to carry out the policies. It is the function of general direction. The term had its origin, I understand, as descriptive of the function of certain Roman provincial executives who were responsible for the general direction of affairs, not detail execution, in their territories. This highest function of enterprise generally is one pertaining to the ownership or similar vital interest, as represented by directors, executive committee, president and general manager; but there is no inherent reason why responsibility for it should not be shared by all individuals throughout an organization.

What I mean by Management is suggested by the Latin origin of

the term—*handling, manipulation.* It connotes the specific responsibility for specific results with respect to a specific element of general affairs. It connotes a specific purpose, specific means and materials for its accomplishment, and a specific art or procedure. This function pertains generally to technical processing, whether in shop or office, as represented by the general manager, works manager, superintendent, other executives, foremen and operatives.

I have been immensely gratified to find this distinction, which I believe is conducive to clear thinking concerning industrial problems, accepted in that substantial book by Oliver Sheldon, *The Philosophy of Management.* His definitions are as follows:

> There are three terms, constantly recurrent in any treatment of the structure of industry, which it is important to define with some exactitude—Administration, Management, and Organization. Though frequently treated as almost synonymous, the three terms, if not easily separable, at any rate should convey quite distinct impressions.
>
> *Administration* is the function in industry concerned in the determination of the corporate policy, the coördination of finance, production and distribution, the settlement of the compass of the organization, and the ultimate control of the executive.
>
> *Management* proper is the function in industry concerned in the execution of policy, within the limits set up by administration, and the employment of the organization for the particular objects set before it.
>
> *Organization* is the process of so combining the work which individuals or groups have to perform with the faculties necessary for its execution that the duties, so formed, provide the best channels for the efficient, systematic, positive, and coördinated application of the available effort.
>
> Organization is the formation of an effective machine; management, of an effective executive; administration, of an effective direction. Administration determines the organization; management uses it. Administration defines the goal; management strives towards it. Organization is the machine of management in its achievement of the ends determined by administration.

If we had had this distinction between major functions available in our thinking fifteen years ago, we should have been spared much waste of unprofitable discussion.

I have heard able men argue for hours whether there can be *scientific* management without coming to any agreement or constructive conclusion. That is because their minds did not meet; their minds did not meet because of faulty terminology; the terminology was

faulty because of absence of clear concepts of functions in enterprise. To the man who has become president the words "Scientific Management" connote really "scientific *administration.*" To the young head of the production department the words "scientific management" connote just what they say, "scientific *management.*" Now administration cannot be scientific in the same sense that management can be. Therefore the minds of the president and the production manager can never meet if the word management connotes a different function to each. But if they will agree to use the words *administration* and *management* as I have defined them, their minds can meet and profitable discussion will result.

My next lecture will be about problems of administration and the concluding lecture about major problems of management.

XV

BASIC PRINCIPLES OF ADMINISTRATION AND OF MANAGEMENT: MAJOR PROBLEMS OF ADMINISTRATION

By Harlow S. Person

So far as I am aware, attention was first called to the distinction between administration and management in the *Encyclopaedia Americana* (1919) article, "Scientific Management"[1] in the following words: "Management characterizes the organization and procedure through which collective effort is affected; administration characterizes those considerations and decisions which establish the purposes which create the need for management, and those broad governing policies under which the management proceeds." Sheldon later expressed essentially the same idea in the quotation at the close of the previous lecture, one paragraph of which I repeat here: "Organization is the formation of an effective machine; management, of an effective executive; administration, of an effective direction. Administration determines the organization; management uses it. Administration defines the goal; management strives towards it. Organization is the machine of management in its achievement of the ends determined by administration."[2]

Distinctions of this kind are of course only generalizations, convenient for the solution of problems, derived from the observation of facts. Such definitions cannot be exact, for the facts from which they are derived are not found in discrete but in continuous series, and one does not know where to draw the line, either in the derivation of the definitions or in their use. While Sheldon and I are in general agreement and both make determination of general policy

[1] Reprinted in "Bulletin of the Taylor Society," IV, No. 5, p. 10 (October, 1919) and in Hunt's *Scientific Management Since Taylor* (1924), p. 5.

[2] *The Philosophy of Management*, p. 31, 32.

an administrative concern, he, for instance, makes the coördination of finance, production and distribution an administrative concern also. I classify the latter as managerial. The existence of such twilight-zone items, however, does not destroy the value of classification.

In fact, I am inclined to believe that we may come to classify as managerial some of the things I now classify as administrative. That will be because of a more exact knowledge which will transform some of the things which are now chiefly matters of policy into matters of execution. Whether an enterprise shall deal with workers through an organization of the latter is now a problem of policy and therefore of administrative policy. It is a matter of policy not so much because a general principle is involved as because there are uncertainties concerning what the principle is. The available facts are not adequate to establish a principle. But the time may come when the facts will be adequate; for instance, when dealing with workers through their organizations may be a condition precedent to having workers to deal with. In that case no question of policy will be involved; there will remain only the matter of execution in accordance with the known facts. What had once been an administrative problem will have become a managerial problem.

Likewise a problem which is now one of management may some day become a problem of administration if new uncertain elements enter. The payment of wages in accordance with time employed or units produced is so customary as to be "an accepted fact," and therefore a managerial problem. But imagine that workers should demand for each an annual retainer and the problem becomes administrative, for new uncertain elements would become involved. But then if experience should some day provide adequate data for the establishment of a new procedure, and the procedure is made customary, the problem again becomes one of management or execution.

Therefore we may put the distinction between administration and management in another way. Enterprise consists of two grand groups of problems, characterized by the adequacy of the facts available for their solution. That group of problems for which there are not relatively adequate data we solve by formulating general policies, and we call these administration problems and poli-

cies. That group of problems for which there are relatively adequate data we solve by establishing a procedure determined by the facts, and we call these problems of management or execution.

Put in still other ways, administration is concerned with the "exceptional" situation and management with the situation which is routine—really or constructively routine. Again, administration is concerned with the objective, procedure and results which are not clearly formulated and management with the objective, procedure and results which are clearly formulated.

The outstanding administrative problems of American enterprises today seem to me to be the following: 1, the establishment, continuance, or modification of the enterprise in the light of probable industrial tendencies and opportunities; 2, the motive governing the conduct of the enterprise; 3, the relation of the enterprise to the state; 4, the relation of the enterprise to the trade; 5, the relation of the enterprise to the workers; 6, the nature of the technical organization and management of the enterprise.

I. ESTABLISHMENT OF THE ENTERPRISE

It is obvious that the first major problem of administration is raised by the question, Shall I go into this business? For a going concern an equivalent problem is raised by such questions as, Shall I continue this business? Shall I extend or contract my lines? Shall I consolidate with others? What are the tendencies and the opportunities? And so on. It is equally obvious that this is not a problem which we can discuss tonight. It has no special significance except with reference to a particular enterprise, and we are not discussing a particular enterprise. Yet the fact that it *is* a problem of every enterprise should receive more than passing notice.

It was in part with this administrative problem in mind that we focused our attention in the first lecture on certain facts of industrial history. There are times when it is just as important to business planning for an executive to look into industrial history as to consider current production costs and market fluctuations.[3] In that first lecture we discovered that before the war such changes had

[3] E. A. Filene, *The Way Out*, p. 66, 67.

taken place in industry as to give rise to consciousness of management as a problem and to a management movement. The shock of the war accelerated changes which were under way. The disappearance of frontier conditions, opportunities and rewards; the development of large-scale enterprise inductive of state interference; the appearance of new mental attitudes and habits of thought; the appearance of new customs, habits and tastes with their influence on demand—such changes as these have made it necessary for many an enterprise to reconsider its purpose and redetermine the economic justification for its existence.

In this connection it is important to know that an instrument of a scientific nature is becoming available to industry as an aid in the solution of this group of problems. I refer to quantitative measurement. Babson, Brookmire, Harvard and similar services are coming into general use. Realizing that profound changes are taking place in tastes, habits and demand, some progressive enterprisers have conceived the idea of securing special data to measure changes pertinent to their businesses. There has been improvement, for instance, in the quality of radio programs because by means of applause cards (their use has not been encouraged without a purpose) the broadcasting stations have ascertained what the public wants. A few days ago it was announced that less than five per cent of radio-listeners desire jazz. The radio at first impaired the demand for phonographs but improved the demand for certain classes of records; now two great companies are offering radio music by artists of the first class and are measuring the influence on demand. So important to these companies is the securing of data for purposes of measurement that a letter from a listener is rewarded by the "signed photograph" of the artist. Sometime ago a survey was made in the clothing industry and it was discovered that the serious condition of the industry is due in no small part to facilities for outing afforded by the automobile. The marginal utilities of "Sunday-best suits" and an extra pair of shoes have declined while the marginal utilities of flivvers and auto picnicking and camping equipment have increased.

These cases are but symptomatic. Throughout industry there is need for reappraisal. Most industries are safe—but they had better

play safe by proving it. Some industries are safe if modifications in objective and methods are made—they had better ascertain what is to be done. A few industries are likely to suffer such reverses as to have some of the plants outside the margin of profitable existence —they had better ascertain the facts and liquidate before the liquidating becomes too costly.

II. THE MOTIVE IN ENTERPRISE

The second major problem of administration is inseparable from the first. If I ask myself whether I shall engage in, continue in, or modify a particular enterprise, in the light of industrial tendencies, I come to a decision upon the basis of calculated results. The results decide me if they satisfy my point of view towards enterprise —my motives. If I am of one mind I may appraise the results cheaply and decide negatively; if I am of another mind I may appraise them highly and decide favorably. Is it my motive, for instance, to secure profits of speculation and wealth, or to secure a livelihood and render social service?

There has been a great deal said about service which has been emotional in nature and has not made an intellectual appeal. Some of it, in view of the sources, has even impressed one as bunk and has repelled. Yet I believe that slowly but surely the livelihood-service motive is replacing the speculative-profits-wealth motive in enterprise—if for no other reason than that circumstances are compelling a change of attitude. Most of our ethical principles are but the outcome of rationalizations concerning experience and are compulsions of circumstance.

Under the frontier conditions of industry described in our first lecture— discovery, appropriation, exploitation— the individual thought he was from his point of view taking a chance because he could not see what was ahead; but from our point of view we realize that generally he was not taking a serious chance because the great resources, great technical equipment, vast population and increasing economic demand were potentially there. Although he did not always realize it, the dice were loaded for him; it was a dead sure game. He received enormous pioneers' profits—appropriated capital, unearned increment—and regarded it as earned income. He

got to thinking of enterprise and income on a large scale, and of wealth, because it came so easily, as the objective. He did not think in terms of service because he did not have to. Every man was able to serve himself and did. If the individual was served, society was served. Individualism was rampant among great resources The concept of service to the other fellow, or to society, as an essential purpose, did not have to enter into a transaction. Therefore the dominant motive in enterprise came to be the individual speculative profit and ultimate wealth.

But with recognition of the changes described in our first lecture are coming changes in ideas. After resources had been appropriated and title taken by individuals; after enterprise by new generations became possible only with borrowed capital; after materials for enterprise could be secured only by purchase with the capital; after large-scale industry and division of labor with the necessity for coördinated direction developed; after recognition of such facts of experience as these, new concepts concerning the individual and social obligations of enterprisers found a place. It became apparent that as a matter of necessity, as a matter of survival, enterprise must render a service to everyone concerned—capitalist, enterpriser, workers, consumers; and that service must consist of creating the satisfactions which will maintain not only the developing industrial order but also the developing social order—the principal satisfaction being livelihood. As Professor Carver told you, a sound system as a means of survival is as important an asset as material things. Industry, sensing a change from dominance of material things as survival asset to the necessity of some system of relationship as survival asset, is learning to think in terms of a common service system.

This service concept is not a concept of giving something for nothing; it amounts essentially to the economic principle that in the long run economic society and the individual in economic society survives by creating a surplus of new utilities which are exchanged in such a manner as to redistribute in accordance with individual desires what has been first distributed in accordance with technical conditions of division of labor. That this is already in your minds was indicated by certain points which came out in discussion of

Professor Overstreet's and Professor Carver's lectures; you talked then about such things as the new religion of creating values, the more vitalizing concept of productivity replacing the concept of property-ownership, the throwing out of non-utilities and anti-utilities, competition in productivity replacing competition in bargaining, and restriction of the doctrine *caveat emptor*.

The doctrine of *caveat emptor*, although older than our frontier, is essentially a frontier industry principle. It worked all right under conditions when the buyer who was deceived in his purchase could recoup his loss by the gain of taking another chance—under conditions of abundance of resources which made the number of gains exceed the number of losses. But with the disappearance of frontier industry *caveat emptor* becomes a social disutility. The purchaser is learning to purchase on the basis of service value, and the producer and seller is learning to provide on that basis. "Mahogany finish" and "combination mahogany" are replacing "solid mahogany" in the offering of wares made of birch. "One price to all" and "the price is plainly marked on the tag" are replacing the mystic price symbol.

The individual enterpriser, in determining the purpose and nature and in estimating the future rewards of his enterprise, must take those things into consideration. From a restricted point of view his economics, as Professor Carver told you, may be concerned solely with what it is economical to do; but from a less restricted point of view, what it is economical to do is determined in large measure by other individuals' impulses in reaction to environment. Thus economics is concerned with psychology.

III. THE RELATION TO THE STATE

In its evolution from simple frontier conditions to more complicated industrial conditions society has suffered certain inconveniences of which it is attempting to relieve itself by legislation restrictive of individual freedom in enterprise. On the one hand there is the accomplished fact of general regulation of working conditions which industry, amused rather than alarmed, at first called "grand-motherly legislation;" on the other hand there is the threat of severe regulation and even of public ownership which industry, now alarmed

rather than amused, calls "socialistic" and "bolshevistic." For some industries this tendency has given rise to obvious difficult administrative problems, and no enterprise can ignore it in determining long-run policy.

Important as is this administrative problem, to give it adequate attention tonight would lead us far afield. I desire simply to present briefly the point of view that the social tendency which disturbs industry is society's reaction to the conduct of industry—to excessive individualism under circumstances which make individualism a bull in a china shop—and that the relief to industry must come from a more social individualism, from voluntary conduct which corrects the social inconveniences and removes the stimuli to the particular social reaction. If industry does not voluntarily take corrective measures, it will have grounds for fearing the worst. The social inconveniences will be relieved one way or the other. In the terms of Miss Follett's philosophy, it is a responsibility of industry to provide the inventive genius which will integrate conflicting desires.

Generally industry appears not to appreciate the problem and the only solution. One searches the resolutions of bankers' and manufacturers' conventions for constructive plans and one is disappointed. They talk such generalities as "less government in business and more business in government"; they cry for a return to normalcy, normalcy meaning the conditions of an earlier generation. They ignore the reality of the problem. But the problem stubbornly refuses to ignore them.

Yet there is evidence that here and there groups in industry are sensing the problem and are making experiments which, although at present hesitating and crude, in principle hold the solution. First the baseball industry put itself into the hands of a dictator who should regulate the industry in such a way as to meet society's requirements; then the movie industry took a similar step. Recently the electric transportation industry appointed its integrator. The theatre industry of New York is about to experiment with a citizens' jury; the publishers propose to appoint a censor for that industry, and items are appearing in the press suggesting the appointment of Mr. Hughes as an integrator to solve certain problems of the churches. These are significant developments.

Not less significant is the viewpoint of recent declarations of organized labor. "The functional elements in our national life must fit themselves to work out their own problems, eradicate their abuses and furnish America with an ever increasing flood of commodities. . . . . Industry must organize to govern itself, to impose upon itself tasks and rules to bring order into its own house. Industry must bring order to itself constructively or it will have an order thrust upon it. . . . ."[4] And equally significant is a sentence from the report of the United States Coal Commission: "The Commission has aimed to make such proposals as will increase rather than decrease *the sense of responsibility within the industry*."

You may ask the question, "Is not this a problem of group action, rather than individual action?" The answer is, "Yes; but group action is the sum of the actions of individual enterprises expressing individual administrative policies."

IV. THE RELATION TO THE TRADE

Therefore the relations of the individual enterprise to the trade group becomes a major problem of administration. What shall the policy be? Again we have a subject which would lead us afield were we to give it adequate consideration. We can only call attention to evidence of the beginning of a new concept of the function of the trade association.

The earlier attitude towards the trade association is still generally the dominant one. The individual members came in more or less reluctantly, emphasized small matters of personal advantage, and had no vision of the possibilities in group action, of individual responsibility to the trade or of trade responsibility to industry. They saw in it such advantages as central credit records, united pressure in securing tariff privileges or united defensive action against restrictive legislation. At first the individual member was willing to receive all it could, but not to give much or to conform much.

But these associations once established, increase of common problems and able leadership caused another point of view to develop. The work of some of these associations has gradually become more

[4] Declaration *Industry's Manifest Duty*, passed at the Portland, Oregon, 1923 convention of A. F. of L.

educational and has achieved noteworthy results in improving trade practices and raising trade standards. It is not an uncommon thing for members to report the results of their individual operations as contributions to trade data which afford every enterprise in the trade information for quantitative measurements on which to base administrative policy and managerial plans. The concept of benefit through common service is gaining on the concept of special advantage.

We have read news items recently concerning activities of the fur industry in establishing higher standards for the trade, and of oyster dealers planning to forestall sanitary regulation on the part of government by sanitary regulations of their own. There is the instance of certain associations of clothing manufacturers coöperating with workers' associations in constructive efforts to regularize employment; and there are the cases mentioned above of groups agreeing to abide by decisions of self-appointed dictators.

The attitude of the individual enterprise towards associated effort is an important problem of policy. The individual enterprise may help to constructive achievements or it may be a burden for the trade to carry. And if it is a burden to the trade it will be the one to suffer in the long run.

V. THE RELATION TO WORKERS

We find little evidence that there was consciousness of a problem of industrial relations half a century ago. Then in the eighties came big-scale enterprise and realization of the difficulty of supervising workers, and industry began to seek for incentives to replace supervision in differential wage systems. Consciousness of a problem of industrial relations was emerging. The practical problems of coördination, of goodwill and incentive increased as industry became more complex, theories began to be formulated, a circular reaction between these set up, by 1900 a few executives with vision had begun to make noteworthy experiments in industrial government, and a decade later a Robert Valentine or a Robert Wolf was making the problem of relations with workers the essential element of his industrial philosophy. Then came the war with its problem of hiring, the propaganda which made labor more conscious of its function and power, the restriction of immigration and the diminution of the

margin of free labor, new theories and new complicated problems with their circular reactions, and now many executives are convinced that "the problem of management is the management of men." It is a management problem, as I shall indicate in the next lecture, but because so little is known about how to manage men it is a problem of general policy and therefore of administration.

Yet I believe we have a pretty substantial group of basic facts to direct us along the way which leads to solution of the problem. First the facts pertaining to the mechanical nature of enterprise.

1. Division of labor is a great waste saver, as Professor Carver told you, and for that reason will not be given up voluntarily by industrial society. Society will never give up what enhances the value of division of labor and what division of labor requires—machine industry, for machine industry saves waste by multiplying productivity many times. Essentially all of these commodities of which we have come to enjoy the consumption we shall insist shall continue to be produced. Most of us consider increase in the quantity and variety of things we enjoy the measure of advance in civilization.[5] This fact must be the datum point from which we start.

2. Another fact called to your attention by Professor Carver is that division of labor as developed with the facilities of machine industry makes work highly impersonal. There can be neither the supervision nor the companionship—let us say the supervision of companionship—characteristic of an earlier industry. We may deplore this loss, but it is a price we shall not hesitate to pay to secure the production advantages of division of labor and machine industry. We must accept that also as a fact which conditions the problem of human relations. This, like the preceding fact, must be faced, not evaded.

3. But accompanying these is another fact which cannot be evaded. Although we must accept impersonal relationships, we cannot have autonomy on the part of the workers who are participating in division of labor; or, at least, autonomy must be conceived in a new way. This also Professor Carver called to your attention. Under division of labor the result of a worker's effort has no social

[5] E. A. Filene's "The Way Out" is through more mass production, at least of staples.

or individual value—fundamentally has no value to sustain existence—if it does not match up with the efforts of other workers in ways which are complicated by shape, size, material, quantity, quality, time and other considerations. Inherent in division of labor and machine industry is coördination, and coördination restricts autonomy. We may devise some way of enhancing the value of whatever autonomy remains possible, but that is another matter.

4. The next basic fact is in the nature of a dilemma; our relationships must be impersonal yet we cannot have autonomy. We must have supervision yet we cannot restore supervision of companionship. Impersonal relationship becomes critical. Here surely is opportunity for inventive genius to integrate conflicting situations. A technique must be devised, for, quoting Miss Follett, "responsibility spread out does not take the place of technique." Few realize that the inventive genius has appeared and the basis of the integrating technique invented. Of that, more later.

Now the facts pertaining to the human nature of workers.

5. Labor is a commodity for which a price must be paid. I imagine many of you felt at least a slight shock when Professor Carver made that assertion, for we have become accustomed to hear it stated so frequently as to have come unconsciously to accept it as a fact, that labor is no longer a commodity. That is in part a matter of definition. Labor is no longer a commodity in the sense that the worker may be treated as a work animal, to be bred and used and kicked aside, as in slavery, or to be hired and fired at will, as in modern industry; but it is, nevertheless, a commodity in the sense that workers are conscious of their capacities, of the need for them in industry and of relative scarcity, and that they set a price upon labor and bargain with enterprise in the sale. More than that, workers are class-conscious, are to a large extent informally and to a considerable extent formally organized, and utilize the power of organization in bargaining. Generally the characteristic of that power which complicates the problem of industrial relations is that it is power which strives for power-over, instead of for Miss Follett's power-with—a lesson learned from ownership.

6. The worker in selling the commodity, labor, demands a quid pro quo, as any merchant does in his transactions. But the mer-

chant sells a material thing of which the relinquishment is simple and of which the delivery involves no complications; the professional man sells that of which the relinquishment is not so simple and of which the delivery involves certain complications, giving rise to special professional "status" and "considerations;" and the worker delivers that of which the relinquishment is still more complicated and the delivery involves numerous complications, giving rise to many special considerations analogous to those of the professional man. The worker is living his life, must get part of the enjoyment of being alive, in the process of delivering his commodity.

Therefore the worker makes as part of the price he is to receive, consideration for himself as a human desirous of getting the most enjoyment and satisfaction out of life. Like the doctor or the lawyer, there are "professional" as well as monetary considerations. Monetary consideration is in the long run the most fundamental consideration to the worker—as is the price to the merchant and the fee to the lawyer or the surgeon and the salary to the teacher—for the reason that it contributes most to livelihood. But we must not fail to realize in deciding upon a policy of industrial relations that other considerations are nevertheless of fundamental importance.

We hear much now-a-days about workers' desire to be treated as craftsmen and as men; for some exercise of initiative and opportunity for self-expression; for the privilege of giving "consent," and of "participating in management." These are expressions as yet without definite meanings which represent a grouping towards a "status," identical in principle with that of the professional man, which will reconcile human aspirations with the necessity for and limitations of division of labor and machine industry. None of these things can be disregarded.

Just as household and handicraft industry at their best had elements which were unenjoyable, so machine industry at its best has elements which are unenjoyable. Uniformity, impersonally forced application, monotony, fatigue and other disutilities are involved; there is limited possibility of craftsmanship and of release of the creative instinct. But it is a responsibility of management in formulating a policy of industrial relations to appreciate that one ele-

ment of the problem is to eliminate if possible, otherwise minimize, and at all event pay for, these disutilities.

Let us assume then that our administrative policy of relations with the workers is to be established along these lines. How are we to express the policy—make it concrete? Many well-intentioned owners and executives believe they are establishing a policy of industrial relations by reciting such facts as we have here recited, drawing such conclusions as we have drawn, and then telling the world that that is their policy. All of that is not more than something antecedent to a beginning. Policies are really expressed only when they are made concrete in activity. There is only one activity which can express adequately an industrial relation or any other administrative policy. That is the activity of organizing for and managing operations.

VI. ORGANIZATION AND MANAGEMENT

Therefore the problem of what sort of organization and management shall be established is not only a major administraive problem, but it is, because other policies must be expressed through organization and management, *the* major administrative problem. It is how management, using organization, carries on, that tells the story of administration's decisions concerning the nature of the enterprise, the directing motive, the attitude towards the state and towards the trade, the policy of industrial relations. That is why we have reserved the last lecture for consideration of major problems of management. But let us now, as the conclusion of this lecture, make a brief preliminary statement of the elements of administration's management problem. Administration must know these before it can establish an adequate organization and management.

In the light of all the facts and conclusions which have been brought to your attention in this series of lectures and discussions, is not the following a reasonable statement of those elements? In establishing an organization and management, administration must:

1. Accept the fact that conditions of individual opportunity in the United States have changed profoundly; that generally enterprise "profits" can no longer be derived by the process of appropriating unappropriated natural resources; that profits must be derived

by the process of creating new social utilities; and that this requires precise and economical utilization of economic energies which must be so manipulated that their value is replaced and there remains a net social income to be distributed.

2. Accept the capitalistic régime of machine industry and division of labor, because this is the only economic system available which can be sufficiently economical of energies, that is, productive, to create the goods and services to satisfy the wants society has developed and will refuse to curtail.

3. Consequently, promote and refine division of labor, and promote labor-saving invention. In the words of Professor Carver, there must be established as a survival asset a sound system of increasing prosperity by enlarging the stream of human energy; or in the words of your discussions with Professor Overstreet, productivity must be the vitalizing concept, non-utilities and anti-utilities must be thrown out, and there must be a new religion of service through creation of utilities.

4. Recognize the apparent dilemma that there can be neither workers' autonomy of the kind which was possible in frontier industry nor companionship supervision of the earlier sort; yet that division of labor and machine industry technically *require* both supervision and autonomy. There must be devised a new kind of combination of supervision with autonomy which resolves this difficulty.

5. Recognize that, as Professor Carver states, workers have class consciousness and that they insist that labor shall be considered a commodity to be purchased and paid for; that class-conscious workers now seek power in negotiation of Miss Follett's *power-over* kind; that this is the kind of power also sought by class-conscious owners and managers; that this kind of power in negotiation is not consistent with genuine good will and coöperative effort, with productivity as a vitalizing concept, or with a new religion of service through creation of utilities; but that there is a socially more valuable kind of power, Miss Follett's *power-with*, which may be made to replace it through wise administration and skillful management.

6. Recognize that the development of *power-with* must have as its basis workers' good will and disposition to coöperative effort.

7. Recognize that good will and disposition to coöperative effort

can be developed and maintained only through satisfaction of the workers' sense of justice, this sense of justice being a function of total situation, involving among numerous things the relative amount and regularity of income, the pleasure and dignity of working conditions and of personal contacts, the standard of living, and consistency of obedience with individuality and self-expression.

8. Recognize that adequate treatment of all these elements of the problem requires the development, as was indicated by Professor Carver, of more efficient and more abundant managing ability.

Certainly these elements present a problem of apparent complexity and difficulty for administration in establishing the organization and management of an enterprise. Yet it is my purpose to show you in the next lecture that the system and principles of management described in my second lecture have already come near to meeting the requirements of these elements of the problem, and contain within themselves the capacity for development eventually to solve the problem adequately.

XVI

BASIC PRINCIPLES OF ADMINISTRATION AND OF MANAGEMENT: MAJOR PROBLEMS OF MANAGEMENT

By Harlow S. Person

It was suggested at the close of the previous lecture that, conduct being the only means of really expressing policies, the most important of administrative problems is the problem of developing an adequate management for the conduct of operations. If concrete evidence of a policy is not found in the work of management, then that policy has no existence, no matter what the enterpriser may assert. Therefore administration must establish that kind of management which can and will carry out its policies, and must make its policies known to management; the management on the other hand is not effective if it does not carry out those policies. Who is prepared to say that it is easier to carry out a policy than to formulate one! Therefore the problems of management are comparable in importance and difficulty to those of administration.

From our previous discussions we derive the following among major problems of management.

1. It must manage in a capitalistic régime, and utilize division of labor and labor-saving machinery, because of the extraordinary productivity of these mechanisms; and if there are disutilities attached to these, it must eliminate and alleviate the disutilities. It must so far as possible manage these disutilities out of the way.

2. It must have profits through the creation of utilities as its motive; for the industrial era has passed when generally profits can be derived by taking title to unappropriated resources, by waiting for a market to grow up, or by other ways of securing pioneers' profits.

3. In fact, under present conditions in which maladjustments following the war have thrown enterprise into a buyers' market, in which a new normal adjustment of effective demand to potential supply has not been effected, and in which competition is becoming ever keener, management must exercise the utmost economy in its operations. The individual enterprise must not only replace what it consumes, but it must in the process add thereto, for it is from the new increment that its profits—its sustenance—are derived. To these ends it must avoid application of energies, material or human, to creation of the wrong—that is unmarketable—commodity or service; to the creation of the right commodity or service in wasteful —that is, unmarketable—quantities; and it must avoid the waste of energies which are dissipated because not applied at all, for energies of production are wasted and are a cost when not employed.

4. Management must establish good will among the participants in enterprise, for under division of labor participitation in enterprise is essentially an adventure in coöperation and effective coöperation is impossible without good will. Under division of labor understanding of objective and of parts to be played in achieving the objective are essential, and ill will refuses understanding. Coöperation under division of labor requires on the one hand submissiveness to a rule of order and on the other hand the stimulus of individual autonomy; good will is essential to reconciliation of these apparent opposites. Also understanding and reconciliation of individual autonomy with submission to a rule of order are essential to good will.

5. Management must develop more abundant and more efficient managing ability; for adequate solutions of the management problems stated here require more and better, at least more of the best, managing ability now available to enterprise. There is a management problem and a management movement not only because of the changes in industrial conditions which have been portrayed, but also because there is not a sufficient quantity of managing ability competent to understand those conditions and manage in a way to solve the problems they present.

Yet management is learning its task and is developing an attack which goes to the heart of the problem.

I. USE OF THE SCIENTIFIC METHOD

In the words of a French engineer, de Freminville, Taylor brought science into the shop. Those who have learned from him are bringing science into all departments of enterprise. By this we do not mean science applied in mechanical devices, but science applied in the use of devices, in management itself. It is the conviction of those who practice and believe in scientific management, that most of the mischances in enterprise, whether with respect to major, intermediate or minor purposes, or with respect to major, intermediate or detail actions, are caused by guessing and chance-taking which would be unnecessary were there ascertained all the facts which available methods of research, investigation and experiment have made it possible to ascertain. And those who are of this persuasion are utilizing the scientific approach along the whole gamut of managerial problems; from the use at one extreme of quantitative measurements in estimating probable industrial tendencies, in ascertaining approximate demands for specific commodities and services, and in formulating schedules for operations, to the use at the other extreme of experiments of a laboratory order in ascertaining precisely what a man and a machine can do and at what cost. By measurements of tendencies and of demand the Dennison Manufacturing Company and the Walworth Manufacturing Company were able during the worst of the depression to take measures which kept operations within an unbelievably small per cent of normal. By standards derived from the study of machine operations the Holt Manufacturing Company has been able to maintain for 789 consecutive working days—over two years—an exactly scheduled production in which over 8,000,000 individual machine operations have been kept on schedule. Such feats of elimination of guess and chance, of elimination of waste of misapplied or idle energies, is possible when each problem of management is resolved by utilizing the appropriate methods of science. The utilization of these methods, as it becomes more general, will cause another industrial revolution.

Scientific management, therefore, is the management which bases its managerial actions upon exhaustive investigation of facts. It is a management of precision and economy because actions correspond to the facts ascertained. Experience in scientific management has

already established certain standard practices which are based upon facts which appear to be general and enduring. Some of these it will be worth while to consider in detail.

II. FUNCTIONAL ORGANIZATION

In the passage from Sheldon cited in an earlier lecture, organization was characterized as the tool of management given it by administration. I cannot see it as a separate thing like that; to me organization is a system of relationships of which administration and management are a part; a system of relationships between things to be done, means of doing the things to be done, and the doing persons. This system of relationships is inherent in the nature of the enterprise, in the purpose and the technical means of achieving it; and the forming of an organization consists, not in creating something new, but in analyzing the nature of the enterprise and discovering thereby what the inherent functional elements decree the organization must be. Organization, therefore, must be functional.

Even so-called military organization in industry is functional in its broader aspects. The division between general management (coördination), financial management, sales management and production management in manufacturing is functional, is inherent in the nature of manufacturing; so also the distinction in a department store between general management (coördination), financial management, merchandising management (selling), store management and advertising is functional, is inherent in the nature of that sort of enterprise. To that extent enterprises of these classes have consciously or unconsciously analyzed purpose, means of achieving the purpose, and responsibilities to be assumed by persons in utilizing the means, and in that analysis have discovered the broader aspects of functional organization. Most enterprises, however, have not gone farther than that. The term *functional organization*, as now generally accepted, is applied to enterprises which have made such an analysis complete and have discovered and delineated the system of relationships inherent in the enterprise to the *nth* degree.

For instance, we decide to establish an enterprise to accomplish a particular purpose. We analyze the purpose and the technical means of accomplishing it. We find four grand classes of means—

or actions—involved, A, B, C and D. Pushing the analysis further, we analyze A, B, C and D, and discover A, for instance, to break down into E, F, G, H and I. Analyzing further, we find E to break down into J, K and L. And so on. Finally we picture graphically the system of relationships our analysis has discovered, and we have a functional organization chart. Persons are not yet involved; the first analysis in organization is concerned with things to be done, not with persons.

Now the great value of such an analysis and the resultant portrayal of relationships is that it makes for understanding of parts to be played by those who become the participants in enterprise. Each individual will be able to understand his task as a thing in itself and in its relationships. Such understanding is of enormous consequence.

In the first place, it obviously promotes technical efficiency, automatically eliminates much of the waste of misapplied effort. If a function is clearly defined and understood, a normal person responsible for it will be able to learn to do it correctly, if such learning be within his natural capacity, or he will acknowledge inability to do it correctly and give way to one who is competent, for bluff cannot exist where there is perfect understanding. Technical efficiency results naturally from the understanding made possible by functional organization. If management discovers, defines and observes the functional organization inherent in the enterprise, much has been done to solve those managerial problems relating to technical efficiency.

In the second place, functional organization goes a long, long way towards establishing good will on the part of all participants. It is the principal means of reconciling supervision with individual autonomy, of reconciling being bossed with individual freedom. It helps to establish power of the power-with variety. For under functional organization supervision and power are attributes of functions, not of persons. One is willing to be bossed by his responsibility, for there is a freedom in meeting one's impersonal responsibility. Professor Carver told you that to be driven by impersonal human circumstances or by calculable human law is not very irksome nor disagreeable; Miss Follett said to you that if

both sides obey the law of the situation there is no question of power-over, that liberty is consistent with obedience to a functional unity, and that we should seek, not equal power, but functional power. I have heard Mr. Dennison say that in their plant under functional organization the word *authority* has gradually disappeared from their plant vocabulary; that one speaks there of one's *responsibility*.

Miss Follett has given the second best argument for functional organization I have heard, the best being, of course, the argument of the records of achievement where functional organization exists. In her discussion of the giving of orders she said:

> We have here, I think, one of the largest contributions of scientific management: it tends to depersonalize orders. From one point of view one might call the essence of scientific management the attempt to find the law of the situation. With scientific management the management are as much under orders as the workers, for both obey the law of the situation. Our job is not how to get people to obey orders, but how to devise methods by which we can best *discover* the order integral to a particular situation. . . . . If orders are simply part of the situation, the question of some one giving and some one receiving does not come up. . . . . I think we should ask ourselves to what we owe obedience. Surely only to a functional unity of which we are a part, to which we are contributing.

The only way to understand that functional unity to which any one can gladly give obedience is to analyze the unity and establish understanding of functional relationships. "The first test of organization is how does it make for functional integration," said a predecessor lecturer. That is the value of functional organization.

III. SEPARATION OF PLANNING AND DETAIL EXECUTION

If one has analyzed the enterprise and acquired understanding of functional relationships, there emerge at once administration and management, which we have discussed in the previous lecture, as the major functions of the enterprise, and planning and execution as the major functions of management.

There are some who conceive the separation of planning and performance in scientific management as though it were undesirable and there were choice in the matter. There is no choice; it is decreed by the technical nature of the big-scale industry which we as consumers impose upon ourselves as producers. The only choice

is management's choice of observing a natural law, with advantage, or of refusing to observe a natural law, with disadvantage. If we accept large-scale industry, division of labor and specialized processing as fixed elements in our several managerial problems—and we do so accept them—we commit ourselves at once to acceptance of a central source of coördinating programs which match up and *give value to* the efforts of men working at specialized tasks. Without such a central source of plans and specific programs in the clothing industry, for instance, the greater part of the labors of the designer, the purchaser of the materials, the cutter, the several seamers, the pressers and the salesmen would be wasted, would have no value, for there would be failure to match parts quantitatively and qualitatively into a marketable whole. No one of these specialized operatives is in a position to match the parts.

The individual operative knows this, and his grievance is not against the separation of planning and performance but against that inadequate separation and inaccurate planning which causes waste of his energies. The demand for regular employment and regular livelihood is technically a demand for that better planning and scheduling which takes into consideration the entire range of facts from market demand to detail processing and permits a continuing sequence of matched-up specialized efforts. That is the significance of certain agreements in the ready-made clothing markets, which demand the guarantee of a definite number of weeks of work each year. It is an acceptance of the inherent necessity of the separation of planning and performance, and an insistence on better specialized planning.

Efficient functionalized planning deprives employers of power-over and gives the operative opportunity for power-with, for in a system of relationships devoid of precise planning the individual workman is relatively inconsequential, while in a system of relationships expressing precise planning each workman becomes a king pin. Precise planning requires individual sensitive responsiveness to the appropriate element of the plan; lack of sensitiveness, which includes willingness, on the part of any essential individual neutralizes the working of the plan and the work of coöperating participants. Thus effective planning requires—where it exists is evidence of—

good will. It is one of the most powerful factors of the total situation favorable to harmonious industrial relations.

Total situation is, I believe, the most important aspect of the problem of industrial psychology. Agreeable total situation of each individual is the key to harmonious industrial relations. At present the most disturbing factor in total situation is irregularity of employment and irregularity of livelihood. Correction of these is dependent upon accurate, comprehensive planning of the total program of the enterprise, from the planning of master programs of operations to the planning of the interlocking individual effort at machine, bench, or desk. Participants in enterprise have a right to demand such precise, specialized planning.

IV. STANDARDIZATION

Functional organization involves standardization. That which is analyzed into its natural functional elements is a standard functional unity; it is a definite objective with definite technical means of accomplishment. The elements into which it is analyzed are standard functional elements of a functional whole. It is because the whole and the parts are standardized in their relation each to the other that functional organization promotes understanding of definite responsibilities.

The separation of planning and performance, necessary in the coördinating of separated contributions to a common result, requires a system of standards as the basis for common understanding in the bringing of efforts into conformity with plans. Inexactness in terminology and in concepts will not do, will frustrate coördination. A suit of clothes is not merely a suit of clothes; it is one of a thousand possible wholes made up of permutations and combinations of fabrics, linings, threads, pocket styles, pocket sizes, pocket locations, and so on. Those responsible for the planning function must ascertain what the customer wants, analyze it into its elements, and then pass on to separate performers definite (standard) specifications for their respective contributions. Otherwise a suit calling for welt pockets might come out of production with patch pockets, not satisfy the consumer, and every participant's labor would be wasted. The results of planning must be passed along to performers in the

form of specifications which are unmistakable. There is only one assurance of this—a system of standardization. There are many classes of standards, of which we may consider several of the most important in detail.

a. Standardization of product. This involves standard specifications for the unit product as well as standard specifications for each element of the whole. It is only by such specifications that perfect coördination is secured, coördination of each part with each other part and with the whole, the coördination of the whole with the consumer's desire. The necessity of this is so evident that it requires no discussion.

And it is waste of energy to discuss whether the individual worker in division of labor should set the standards. He cannot do it. The individual worker not only cannot determine the specification for the elements executed by others than himself; he cannot determine the specifications for the one part he executes. For it is not a whole in itself; it is part of a larger whole and its nature is determined by the whole. It must fit. His freedom is limited by that fact. And under division of labor it is an advantage to him that his freedom is limited by exact specifications, for otherwise his product would not fit and his effort would be wasted. Standard specifications are for him an assurance of profitable effort if he does his part well.

b. Standard materials. Standardization of materials is a corrolary of standardization of product and of its parts. The product is determined by the materials of which it is made. And from the point of view of a standardized whole product there is no possibility of worker's choice in the substitution of materials in parts.

c. Standard equipment and standard condition of equipment. It must not be forgotten that the part of the specifications of a product ordered by a consumer is a price. This price is determined by the sum of elemental costs. One of these elements of cost is the worker's wage and another is the machine's wage. To compute a dependable cost requires standards for estimating wage cost and machine cost. This requires a standard machine for each kind of operation and a standard condition at each machine with respect to each operation. You will understand what I mean when I tell you that two machines

of a well-known make, identical and in every part interchangeable, have showed when set up a difference in productive capacity of 60 per cent. In another of many similar illustrations, girls in a factory making electric appliances were found to be soldering together the finest wires on the smallest magnet coils with soldering irons which varied in weight from 6 ounces to as much as 2 pounds. No wonder the planning department could not make exact calculations, and that some of the girls couldn't make average earnings!

The necessity for standardized machines and tools and for standardized machine and tool conditions is obvious. But who shall do the standardizing; the worker or the planning department? It is a splendid concept that workers shall have this responsibility and freedom, but generally they decline to accept the responsibility. If it be done, it must be done by the planning department. Why this is so I shall consider later.

d. Standard methods. With respect to standardization of method there is great misunderstanding. Method in the performance of a sequence of operations is of importance and is not difficult of attainment if attention is given to it. But method in the performance of a detail operation within the sequence is not so important If such factors as the equipment, the location of materials to be worked upon, and the manner of disposing of materials which have been worked upon are all standardized, the method of doing the work is more or less automatically standardized. Any group of skilled workers will then perform the operation in essentially the same way and the same time.

Motion study is of importance in devising systems of performance, as in touch typewriting, and in teaching the young who have relatively few fixed habit patterns. But with respect to adults of fixed habit patterns attention to minute characteristics of motions is not essential, is in fact useless. It is sufficient to standardize the machines, tools and surrounding conditions for each operation and then be satisfied with the reasonable standardization of methods which results. It comes automatically without much attention on the part of workers.

The most important practical element of the instruction card is not the listing of the units of the operation—except for beginners—

but the listing of the proper tools and appliances, and the instructions concerning the set-up of the machine.

The reason why instructions concerning detail motions are not of much use while instructions concerning the machine and appliances are of use, is that workers have fixed habit patterns which restrict adaptability. Habit in adults prevents on the one hand the learning of new minute motions, and on the other hand restricts curiosity and the discovery of new and better methods of work. The majority of individuals are not inventive and have not the impulse to seek the better way of doing a thing. Once established, habits are for most of us difficult to change.

The way to induce change from the inferior to the better is by providing instructions for the performance of the new habit. Habits are not changed by taking thought or by will power; they are changed only by practicing the new habit until it has cut its own groove and has obliterated the groove of the old habit. The instruction card, insofar as it instructs in method, renders the worker a service by telling how to perform a new habit. It describes the essential new overt act, and furnishes stimulus to practice of the new act. The vast amount of printed information about the necessity of daily exercise convinces our intelligence but stirs few of us to action. Walter Camp's little pamphlet with its specific instructions in words and illustrations does stimulate many of us; others are induced by such direct suggestion as comes from WOR with its human voice and music each morning.

Now who should determine the new standard way of performing an operation? Anybody? Yes, in principle. But very, very few of us—by us I mean all workers—will respond to the opportunity. Few of us workers are inventive. Suggestion boxes are a failure. The continuing responsibility of search for new and better methods to standardize must be functionalized as a responsibility of persons chosen because adapted to the task—who are curious, inquisitive, inventive and in command of established techniques of research and experiment. Such functional responsibility is the only assurance of progress on behalf of the whole coöperating group in the discovery of new and better methods. New methods thus discovered may then be offered as new overt acts for our practice in establishing new performance habits.

And generally where search for the new and better is thus functionalized, and new methods are discovered, proved, made standard and explained, the atmosphere developed and the curiosity aroused by the explanation calls out in many workers a curiosity and inventiveness which otherwise would continue to remain dormant. The most effective way to stimulate general curiosity and inventiveness is to establish a research-experimental methods department which stimulates performers by the issuing of new standards of performance.

e. Standard times and rates. The instruction card is concerned primarily with standard times and rates, rather than with details of method. The instruction card explains method in skeleton form, but detail instruction in method is a responsibility of foremen instructors. Taylor's famous or infamous—speed boss, for instance, is an instructor in the art of adjusting the speed gears of a machine so that the machine will operate most efficiently.

A standard time means the time in which an operation and each unit of an operation can be performed by a competent worker if the standard conditions prescribed are observed; and a standard rate means what the enterprise can pay for service in terms of the standard time and some base rate. The instruction card does not say to a worker, "You must perform this operation in X time," but it does say, "You can perform this operation in X time if you choose; in which case we can afford to pay you so much." I agree with Professor Carver that the cash motive, properly balanced with others, is one of the best in the world. As I have said elsewhere, "We must not be unmindful of the obvious fact that income in the form of money is a powerful incentive because by its nature the recipient is able to convert it into a variety of instinct-satisfying forms."[1]

Its value is that it permits an individual contract the exact terms of which are determined by the worker. Instead of restricting him it frees him. Instead of making him an employee subject to the arbitrary will of another, it permits him to get into business on his own account. The enterprise provides orders, equipment, materials and a schedule of rates related to times of performance;

[1] "Bulletin of the Taylor Society," IX, No. 4, August, 1924, p. 170.

the worker can then in his own mind make a contract with the enterprise and conduct a business on his own account. There is involved not only payment in accordance with performance, but worker's choice as to performance.

Price to the customer is in general in competitive industry determined by cost of production. The principal elements of factory cost are materials cost, labor cost and machine cost. Labor cost and machine cost are reducible to the unit, time—so much per hour. Therefore with material cost and the units of labor and machine costs known, the establishment of a standard time of performance places the planning department in a position to make close but profitable contracts with buyers. Management is enabled to market each worker's contribution for him to the best advantage. Standard conditions, including standard times and rates, permit management to make definite contracts in two directions: on the one hand with the purchasers of the product; on the other hand with each contributor to the product. Each contributor to the product becomes a contractor, a business man, on his own account.

Good will is increased when the mental attitude of one who wonders what "the boss is going to order him to do next" is replaced by the mental attitude of one who elects to perform a definite task.

Who determines the standard time and rate? Ultimately, the workers. The standard time is nominally computed by the planning department as a result of investigation and experiment under standard conditions. Technically this functionalized preliminary procedure is necessary. But the provisional time becomes a working standard only after an adequate "shop try-out," when the workers have it in their power to accept or reject it. For sensible management does not insist on a time which the workers do not consider just. (Do not be misled by reports of cases where management is neither sensible nor just, although those, unfortunately, are the cases which get publicity.)

If a standard time is proved acceptable by a shop try-out, the computation of a standard rate is relatively simple. The starting point is the prevailing rate of the community for performance under the standardized conditions prevailing in the community; this is modified by computation and comparison of the great productivity

and cost of the standard conditions, the saving in overhead, and so on, under which the new rate is to be applied in the particular enterprise. And just as the standard time must prove acceptable to the workers, so must the standard rate prove acceptable. Where there is a shop committee both times and rates may be scrutinized and approved by the committee.

f. Standardization of personnel. The human being cannot be standardized in the same sense that product, materials and equipment can be standardized. But it has been discovered by science that individuals have various capacities in different degree. For a given capacity a large number of individuals may be measured and a norm and dispersion about the norm determined. Thus standards of capacities may be established and individuals classified in accordance with variation from the standards. These standard capacities may be related to requirements of specific operations, and a standard of capacity for any operation determined. This makes possible the distribution of individuals among operations in accordance with capacities, with marked advantage to any individual, and to all individuals the value of whose effort is dependent in part on the value of the effort of each. It makes possible more effective instruction. And such assignment and instruction of standardized personnel is made more effective by functional organization, the separation of planning and performance, and the other phases of standardization which we have discussed.

The essential thing about standardization is this: it is an effort to replace uncertainty, chance and guess by relative certainty and predetermined results. It is an effort to take the gamble out of enterprise. Insofar as it accomplishes this purpose it establishes a basis for efficient conduct of operations, continuity of operations and regularity of income for all the participants. And having established a basis for these things, it has also established a basis for good will and favorable industrial relations. For in the final analysis most of the controversies between workers and managements are not caused, in my judgment, by the things emphasized in the controversies—wage rates, working conditions, lack of opportunity for self-expression, and so on—but by the total situation of strain which accompanies variability of conditions, uncertainty of income and

constant readjustment of the standard of living. I believe we should be amazed at the relative simplicity of the controversies between management and workers were industry able to eliminate cyclic fluctuations, secure a regular flow of orders for each enterprise, and induce each enterprise to establish, on such a basis of environmental stability, the precision management implied in functional organization, separation of planning and execution and general standardization of operating conditions.

V. SYSTEM OR ROUTINE

So far we have considered the static elements of the management problem; functional organization and stabilization of conditions which make possible understanding, precise calculations of results and precise actions which achieve calculated results. How does management operate in its dynamic aspects? How are planning and performance brought into energized relationship?

The numerous coöperative activities which are coördinated through the planning group of participants are separated in space and time. Today, in an enterprise having division of labor, a thousand operatives, each playing his individual part and knowing nothing of the part of the others, are producing parts of a whole which must fit each other and the whole; furthermore the parts produced by a thousand operatives tomorrow must fit those produced today; and so on day after day. These nice adjustments have necessarily been planned, but planning is a dead thing if its impulses cannot be sent, like the current along the electric wire, to the various motors embodied in individual operatives; or stored, as in the storage battery, for release tomorrow and the next day by the various motor personalities concerned. It is the function of system to accomplish this very thing. System is that complex whole of recorded decisions, directions, and understandings which loose the energies available in participating coöperators at the several appropriate times and directions of application. The nerve center is in the planning room and the lines of impulse run out to every operative—with lines back carrying return currents.

The nature of the system depends upon the functional relationship of the parts to the whole. There is no such thing as a standard

system, for in no two enterprises is the functional relationship of parts the same; but there is a standard way of constructing—or, rather, discovering—the necessary system for the particular enterprise. That way is through analysis of the functions of the enterprise and the delineation of the nature of the functional organization. Failure to approach system discovery in this way accounts for so many failures of systems—failures because the alleged systems have not corresponded to the functional requirements of the respective situations. It is this correspondence of the system to the functional requirements of the situation which is the criterion of the adequacy of a system. If the system lacks an element required by some functional demand, it is inadequate and to that extent inefficient; if it contains elements not required by a functional demand, it is also inefficient because carrying elements which at least confuse and at the worst neutralize required elements of the system. There is no such thing as an absolute too small or too simple, too large or too complex system. It is a relative matter and the point of reference is the nature of the functional composition of the whole.

The function of the system—consisting of general orders, special orders, work orders, move material orders, purchase orders, tickler memoranda, instruction cards, and so on—is to establish complete understanding of objective and when and how to act on the part of each participant involved. The energies to be brought together in systematic, planned application are embodied in personalities, equipment and materials scattered throughout the enterprise; it is the understandings made possible by system—and by system only—which causes the individual at bench or machine to become the dynamic thing which brings machine energy, material energy and human mental and muscular energy together in the creation of a utility, in what is a utility only because the start at the one machine is made at the correct moment relative to the start at every other machine.

It is obvious that this systematic coöperation achieves technical economy in the creation of utilities. What should be equally obvious is that it achieves mental satisfaction on the part of workers. It helps to establish good will. As worker I am content—perhaps agreeably excited—in the realization that I (with every other cooperator) am doing the right thing at the right time to accomplish

a result of common advantage; and I am reassured and content to know that the very system which gives me the orders of the functional situation will promptly detect and correct whatever failure—due to ignorance, carelessness or ill will—of a coöperator might destroy the value of my careful attention to my responsibility. Furthermore, I am reassured that if in my functional relationship there is any element of dissatisfaction, the causes can be easily and accurately determined and "all the facts laid on the table" in consultation with others concerned.

By functional organization, separation of planning and performance, standardization and system, a reign of law, of order, has been established. Law and order equally applied establish good will. Says de Freminville: "They have laughed at the Frenchman who, whether as workman or soldier, has been 'willing to obey, but does not wish to be commanded.' This has been taken as a joke, but it is no laughing matter. If you prepare the work with the greatest care and arrange the shop in such a way that everyone understands just how things are to be done, the workman will do his part without your being obliged to direct him every minute or to give him imperative orders whose significance escape him, and which antagonize him. He is, in fact, the same man who says when he comes into a shop where order reigns, 'here, at least, one feels one's self under command.' He feels it for himself without anyone's being obliged to call it to his attention, which makes the whole situation quite a different matter."[2] The American workman, there is abundant evidence, is in this respect no different from the Frenchman.

Thus we have in these devices of management a basis for the establishment of good will, for the reconciliation of supervision with individual autonomy, for understanding of the area within which individual initiative, creative effort and self-expression are made consistent with coöperative activity and the common good.

VI. WHO ARE THE MANAGERS?

The objective of scientific management, of the Taylor System of Management—is it necessary for me to say it is that system of

[2] Ibid., X, No. 1, February, 1925, p. 36.

management I have been describing?—is the establishment of the reign of law in place of arbitrary personal direction.[3] What then becomes of management; what are the sources of the impulses we call managing?

Every participant in an enterprise—from general manager to messenger boy—is to some extent a source of managerial energy, and his portion of energy should enter into the general stream. Miss Follett's circular reaction sets in wherever individuals are in contact—in coöperation as well as in controversy. There is no system of management which taps so many services of managerial energy as that which I have here described, for it is a system of mutual understandings, and it is understanding which frees the managerial energy of the individual.

But if biology and psychology have taught us anything, it is that individuals are not created equal in their possession of capacities; neither are the environments which fix these capacities in habit patterns the same. Some are more motor than others, some are more analytic than others, some are more imaginative and inventive than others, some are more informed than others.

Now undoubtedly all of these elements—and others—enter into managerial ability. Some problems of management call for unusual possession of motor qualities, others for unusual possession of analytic ability, others for unusual possession of imagination and inventiveness. Psychology has not yet perfected the technique and been given the opportunity to make the study to give us information concerning the exact nature of managerial ability.

But the function of management is required in enterprise, and nature has a way—the costly way of trial and error—of selecting the necessary abilities out of the mass. Thus we find some individuals conceiving a new enterprise, others establishing the basic administrative organization, others perfecting the managerial organization, others directing the routine of daily activities, and individuals all along the line reacting in such a way as to modify the influence of those who are nominally the responsible directors.

Every participant plays some part in managing, but there are individuals possessing the required combination of capacities whom

[3] Cf. Copley, I, p. 289–293.

the total situation selects for the responsibility of contributing the predominant managerial influence. We know little about this in detail, and I do not intend to inquire into it further, for I happen to know that Mr. Dennison, who follows me, is likely to have something interesting and important to say on this subject. But I will sum up for you my profound conviction as follows: managing ability is a complex of capacities possessed by different individuals in different degrees; the technical situation in an enterprise requires the selection out of the total of participants of a group possessing managerial ability in unusual degree; in some way we do not understand in all details, this group is automatically more or less adequately selected by enterprise and given the functional responsibility to establish such a system of management as will reselect the managing group and tap every source of managerial ability throughout the personnel of the enterprise—even reaching out for individuals among consumers served by the enterprise; and that the system of management which promises most in this direction is the system. I have described, the system which attacks its problems scientifically, analyzes its objective and means, recognizes functional relationships and establishes functional responsibility, creates and maintains standards, establishes a system of understandings, and substitutes so far as possible the known for the unknown.

VII. SHOP COMMITTEES, ET CETERA

It has undoubtedly been a surprise for you that I have said nothing about shop committees and other alleged devices for securing workers' participation and consent in management. You will be more surprised when I give as the reason, exaggerated in the way I put it for the purpose of emphasis, that I consider such things as shop committees relatively unimportant in securing good management and cooperative good will, compared with the aspects of management which I have discussed. Devices such as shop committees are to the management problem what makeshift shoring is to the building which leans and sags. It sustains the building for a time, but the fundamental restoration is to be effected by constructing new foundations, and inserting new sills and Lally posts. The functional integrity of the building must be restored. Likewise in an enterprise

which is experiencing serious managerial difficulties—failure to earn profits and labor troubles—the foundation of the management must be reconstructed and functional integrity restored. The elements of good management which I have discussed are as fundamental to the operations of an enterprise as are foundation walls, sills and bearing partitions to a building.

Even labor troubles are troubles of technical management. "My interest . . . . is not directed towards challenging the technical engineer to give attention to problems of human relations . . . . because if he is a good engineer he cannot fail to contribute to human relations," says Mary Van Kleeck.[4] In commenting on this statement I have said,

> Scientific management believes that good industrial relations arise out of a manner of conduct, not out of everlasting talking. Good industrial relations result from a management that knows what it is doing; a management that makes plans, gets orders, regularizes employment, operates precisely and economically—in other words, does the things which maintain it as a going concern; that brings all the resources of the scientific method to bear on its problems; that establishes contractual relations on the basis of all the facts that are ascertainable; that takes operatives into its confidence and secures approval with respect to details of standard method, time and rate; that enhances individuality in team work instead of minimizing it in mob effort; and that—not least—increases social income.[5]

Where there is not management of this kind, shop committees and similar devices are generally makeshifts, evasions, shams. But where there is management of this kind, the shop committee serves as the final effective mechanism of the whole system of management. The basic management methods make the shop committee genuine and constructive, and the shop committee enhances the effectiveness of the basic methods. At Filene's, at Dennison's, at the Clothcraft Shops, in the B. & O. Shops,[6] there are scientific management and committees, and there is industrial harmony; at certain other places I shall not name there are shop committees and arbitrary management, and there is not yet industrial harmony.

Participation and consent imply power-with. As Miss Follett

[4] "Bulletin of the Taylor Society," IX, No. 6, December, 1924, p. 242.
[5] Ibid., p. 238.
[6] Consult Common's *Industrial Government*, McGraw-Hill Co.

has said to you; power cannot be given faster than methods are developed for workers' taking responsibility for that power; power, in fact, cannot be conferred, it is a blossoming of experience and understanding. Understanding comes out of experience only in that management which, in Miss Follett's exact words, has "all its parts so coördinated, so moving together in their closely knit and adjusting activities, so linking, so interlocking, interrelating, that they make a working *unit*."

XVII

PRACTICAL APPLICATIONS OF SCIENTIFIC PRINCIPLES TO BUSINESS MANAGEMENT: BIOLOGIST AND PHILOSOPHER

By Henry S. Dennison

I will take your biologist and your philosopher this evening, with your permission, in alphabetical order. Dr. Caldwell gives us a fair start—gives, in fact, a rich warrant to your whole course. "Our mental attitudes," he says, "are largely matters of social inheritance." Standpoints of living and thinking and acting are given to us in our social group. That is the place in which we can really make the biggest change. "We can so direct social custom that defective biological inheritance, within very wide limits, may be held in check if undesirable, or developed if desirable, by our social inheritance." The powerful influences of industry and commerce then can be directed upon society for its good or ill. The business manager, as social engineer, takes rank at least with the eugenist and surely with a more immediate chance to help or hinder.

Frankness, an open attitude of mind, gives us social control of our inheritance. Dr. Caldwell states, "The way social groups are conditioned . . . . to our offspring is of far more significance than a knowledge of biological inheritance." Frankness and an open mind are primary needs. The scientific way of thinking brought into commerce and industry means progress—but it means more. It means the conquest and harnessing of greed. For greed flourishes and will always flourish where prejudice, narrowness, fear, cocksureness and oratory can feed it. A man can be greedy and of a scientific mind, but his greed is chained by one leg. As a notable exposition of just what a scientific mind may be and of the promise it offers, I sincerely recommend to you A. B. Wolfe's recent *Conservatism, Radicalism, and Scientific Method.*

But the scientific mind must *stay* open and *keep* eager; for it, there can be no finish to education. Dr. Caldwell hints that education for any real person must go on for the length of his natural life, and I want to broaden his hint and add also that it must go on systematically, intensely and purposefully. Furthermore it is decidedly to the interest of business management for its own health to see that it does. Some of us are trying to make provisions that it shall—inadequate as yet—but beginnings, with company libraries, management meetings, and evening courses at the shop or outside.

In broadening the horizon as you have done so far, into other fields than the too narrowly commercial, courses like this are of splendid service.

But best of all there is another thing that science has to contribute to this determination of social environment. Dr. Caldwell says, "In science as in society the older idea was the concept of authority determining situations for us. . . . . The authority of truth, frankness, just relations, those constitute the real authority society must accept and develop." Here he foreshadows Miss Follett and dismisses from any proper place in modern business the authoritarian to whom unquestioning obedience is of more value than wisdom—who would rather be president than right.

Dr. Overstreet and Dr. Person showed how since the industrial revolution the pecuniary interest—the money-making motive—has held the place of authority, sometimes exclusively, in business, by control through ownership. They have hinted, too, that it is by no means historically necessary that it should have done so. Motives of artisanship, of desire for good repute, and of service might, by analogy with other human activities, have joined in some force with the profit motive to make a compound actuation behind business which would have modified profoundly its standards and practices.

They have shown that the belief is permissible, as a working hypothesis, that a strictly businesslike job can be immeasurably higher than "give as little, get as much as you can." They give us rich scientific justification for the legitimate use of such hypothesis. With but a fraction of such justification I for my part should nevertheless call upon the business men of America by their faith to make possible and by their devoted efforts to make true the elevation of business management into a great profession.

And to start right, we in business must throw away pet alibis and boasts, and any credits stolen from the lavish hands of nature or from the devoted minds of unbusinesslike scientists, and confess. Our object, ninety-nine times in a hundred has been almost single—to *make* money; before 1908 whether we made it *out of* others or to their good or harm it was Utopian even to question. We "were not running Sunday schools" though out of our spoils we might lavishly support them. Pro-social, anti-social, were words for despised theorists and mushy, effeminate sentimentalists who probably were crooks and hypocrites as a side line anyhow. Days of rugged pioneering they were of a standard of behavior easy to account for, but good to improve upon.

With our minds cleared by such a confession we are ready to look to the road, and fortunately we look through the kindly eyes of Dr. Overstreet. I say kindly, for he says business men are engaged in what is perhaps the "most trying enterprise in all life" and in the same sentence, that the college professor has "none of the difficulties, none of the temptations that a business man has to face." Let us in business respond in part to his true courtesy by stating in humble frankness that not only has he given himself too little excuse for transgression and us too much, but has refrained from seizing the opportunity to show how his own profession has by its own faith and good works lifted itself above some of the temptations which might beset it. Remember that his Oxford don did once hire touts!

Dr. Overstreet calls us to perfectly straight thinking whether it turns out to be complimentary to ourselves or not, and he sets the example; let us try to follow it. He asks us first to be honest and straight-thinking as to the true social value of the goods we are producing. Such thinking and the judgment which should follow it are extremely difficult, but that can be no excuse. It is complicated by the fact that each item we make has useful and non-useful elements in it and can be put to valuable or harmful purposes; but that is no excuse, either. We must somehow make a passable judgment as to the by-and-large net profit to society likely to result from our productive or distributive activities.

As a first step it is not so difficult to judge of the definitely harmful goods,—drugs to addicts, booze, and goods used chiefly or only for

competitive display of money-getting prowess, whose only claim to value lies in their expensiveness. There are jewels which add to the beauty of life and those which by no stretch of the imagination can be said to add to anything but the notoriety of their wearers. It is frequently impossible to see a small fraction of $49,983 value difference between a $50,000 pearl necklace and a $17 synthetic imitation.

We are bound also to count all the costs of manufacture, not mere dollars alone. The wantonness and degradation of egret production has been recognized and the excess cost beyond consumption value of white phosphorus matches. With goods which are merely useless, not harmful, even smaller liabilities than these introduced by their production or distribution may settle the case against them.

But in such a valuation of our goods we do not need to descend to the 17th century puritanical designation of all luxury as sin. For not only can much which adds to the beauties of life do more to lift the moral standard of mankind than many sermons, but it is through a reasonable and not too extreme indulgence in things needless today that social groups acquire what we call a higher standard of living. Tea, sugar and even Fords were once luxuries.

All through such evaluations we must confess to the principles of relativity. It is most often the indulgences out of proportion which are harmful, rather than the goods themselves. Absolute judgments are even more impossible in social matters than in physics. Judgments to be valuable must be relative to the times and places and in due proportions. All the more is it necessary again to warn ourselves that such complications furnish us no excuse for not making honest attempts at judgments. Nor is just a single good point found in favor of a product sufficient to give it an alibi.

Dr. Overstreet asks next a critical attitude toward the relationships of men with men in our organizations. Are the imperfections of such relationships in our great organizations perhaps doing harm faster than the products do good? Is there fear where there should be confidence, misfittings where there should be opportunity for one of the deepest satisfactions of life? Is there hatred of bosses where there should be the joy of following a beloved captain? Is there a hampering unrest where there should be an inspiring unrest? Is there servitude where there should be teamwork? I will not go into detail now

on this subject. I would not trust myself to stop in four lectures. But may I say now that exactly to the extent to which business management becomes a great profession, just to that extent and only to that extent will progress be made; and that instead of work in large organizations being full of necessary evils, I know it can some day become an absolutely satisfying and joyous part of life.

It will not be by technique alone that it will be transformed—by welfare work, by clinics, education, bonuses, profit sharing, stock ownership. All these are powerful influences to further social progress or can be prostituted to uses of the reactionary. Welfare has been Hellfare; clinics have uncovered inside information and kept out undesirables; "education into fundamental economics" has tried vainly to foster subservience and a mood of resigned acceptance; bonuses and partnership can breed pace-setting of a sort not too far from that of the Florida convict construction camps; and stock ownership can chain the worker's other economic leg. None of this can be avoided by technique alone or by wording a system, but, and only, by keeping high and powerful in the aggregate of business motives the component motive of service. To advance the human relationships of commerce and industry to higher levels, technique and motive must pull along shoulder to shoulder.

And now Dr. Overstreet puts a poser. Is not trading necessary to business and can it be carried on except on principles of give as little, get as much as you can? I must answer to the first half of the question that, in my belief, trading is absolutely necessary. I can see no possible way by which relative values can be set except by the discovery of aggregate opinion through trading. It is significant in Russia's experience that values could not be set; they had to be *discovered* and so the traders came back early. Our price fixing committees in the war had another rich experience pointing in the same direction. All sorts of governmental or communistic practices may turn out to be possible if trading goes on in sufficient volume to set the *principal* values from which, perhaps, with more or less correctness, the values of other goods may be deduced. But it seems certain that without some important volume of trading the internal coherence of the work-a-day world is lost.

But though trading is necessary, it can unquestionably be bad. In

the first place, some of it merely uses the name trade, being in reality a coercion or other arbitrary use of power. It is no trade at all when one side is overwhelmingly more powerful than the other. But even when it must be included under the definition, trading can be bad if it goes beyond its proper function of finding true relative values and is carried on for its own sake, or through threats of coercion verges towards a mere exercise and display of power. Rather too much of the behavior of our purchasing agents in the business world has carried trading beyond its true function. To buy is the same as to sell; it is to search out the conditions under which a transaction can be of mutual advantage.

Individual trading also tends to take trading out of its proper function. It is, after all, a group valuation that is being sought and not merely the price at which A can sell to B. So the one-price system in retailing has been accepted as a great step in advance over the series of individual bickerings which went before it. And in setting salaries we are recognizing more and more that the individual trade between C and the company can lead to little but harm; in spite of all difficulties, salary scales must be somehow set which can give a broader than individual warrant for the final fixing of any individual's salary. Concerns nowadays are cautious in raising a salary to meet an outside bid even for a valuable man, because of the introduction into their relationship of the trading basis in a form from which it is practically impossible ever to recover. Wages, by the same token, have to have some group basis and here is one fundamental advantage of collective bargaining, whether carried on through unions or works councils.

But to the extent that trading becomes deeply invested with an interest in a true goodwill account or, what I believe to be a bettter name, a respect account, it rises far above its evil possibilities. When a concern or a man is looking for long time prosperity, is concerned with reorders, is carrying on his operations over a broad field out of which he wants continuing trade connections, or where he is dealing with a large organization of many salesmen, trading gets its solid basis and loses, for the most part, its weaknesses.

Miss Follett gave you good grounds for the answer to Dr. Overstreet's problem. Bargaining is a form of conflict and therefore is not bad in itself but can be good or bad in its resolution. If trading

ends in power-over net harm results; if in compromise little good arises; if in an integration civilization marches on.

After the first lecture some one raised a question as to the propriety of considering business as a game. On that point let me suggest that there are so many fundamentally different kinds of games that it will be well for us to drop the simile. If it could always mean what the best Englishman of a dozen years ago meant when he said, "That's cricket" it would be all to the good. But there is roulette—a game; cock fighting; all sorts of poker; bridge; chess; tennis; rowing; football; and all these both with and without prizes or money scores. "Business is a game" can surely enough mean all things to all men. Let us say rather that while it is not yet, business soon must be, not a game, but the highest of professions.

Then came a question as to the prevalence in business of a sense of responsibility, and Dr. Overstreet's brief but suggestive analysis of what a sense of responsibility might amount to. Am I wrong in believing that, as a man's self respect partly depends upon his holding the good opinion of men whom he respects, and that what he would call a due discharge of responsibility would be assumed by him to gain their approval, so his sense of responsibility is closely parallel to a demand of his own self respect? The kind of folk we think of as expecting something of us and the things we think they ask of us change greatly from age to age. We can, I believe, measure progress away from barbarism by the kind of folk men pick to sit in the galleries to which they play. Dr. Overstreet seems to think—and I agree—that it is getting easier and easier to find audiences who applaud something better than dollar-scooping stunts. By the increase of a sense of responsibility among business men we must mean then that they are looking to better and better men for the approvals which give them their self respect. This theme of the growing sense of responsibility recurs as an undertone through most succeeding lectures. Only it seems to me it is quieted by Dr. Carver's confidence in the beneficient flow of things economic, if left alone.

Dr. Overstreet in his second lecture breaks loose in major mode with his criterion of productivity—"a human being has no excuse for existing unless he puts a really productive contribution into the world"—by their fruits ye shall know them. By this test, he says, we honor

the scientist, artist, inventor—not, mark you, because incidentally and accidentally it happened that, as a by-product of their attempts to get rich the world happened to win, but because they *put* a contribution into the world. Here is a true test. Let us use it in our capacity as galleries and applaud accomplishment of a conscious aim of production service, letting our faces and hands take a rest during the recitals of amounts of money accumulated. We need find no difficulty in judging—we have used just this criterion for the professions. It will mean, as Dr. Overstreet states, that we shall abhor waste as sin. We shall be utilitarian again in a broadened spirit and judge of giant power projects, of conservation, of education, of the management of industrial relations, of the goods a man makes, by what wastes they overcome. The competitive display of lavish wastefulness upon which Veblen has thrown his spotlight mind becomes the flaunting of sin—blasphemy. Competition's test, according to Dr. Overstreet, is the pragmatic test—does it pay society? Much of it does; much will fail under the test, and wasteful competition must be transcended. What the economist calls "free income" must face the test too. Shall we applaud receipts out of measure with productive activity? And let me add, shall we give chiefly to the recipients of free income the voting control of business affairs? Says Dr. Overstreet: "what hinders business from coming into its own more than anything else is that the older concept of property still largely governs our life. This concept was most powerful in the agricultural period of society. The obvious thing was to *own* land. The business of life, then, was to *own* as much as one could." And in the same lecture "where the money-making idea is the animating idea of an enterprise, all kinds of anti-social results may be expected."

Here indeed is a full-throated challenge. He may be wrong of course, but he offers a working hypothesis which gives each man a chance to make a real contribution to progress. I would rather be wrong and fight with Overstreet than right and be a passenger with Carver. Overstreet may be right too, of course. Then what becomes of Dr. Carver's *laissez faire*—or even of his employee stock ownership—if much of the ownership concept, as Dr. Overstreet says, must be transcended?

My answer, and yours too, I hope, will be ready for the next meeting.

DISCUSSION

Question: If we are headed toward production for use or service as contrasted with production to give individual profit, what is the channel through which that can be brought about—individual company experimentation; industrial organization of some kind; or governmental control?

Mr. Dennison: I do not consider it a contrast; nor believe the profit motive is going to be superseded by the service motive. I think it will be largely affected by it and, I hope, overwhelmed; but it is a complex of motives in which the service motive has a real, definite part not as a by-product, but as a primary component. Secondly, I think the social usefulness of products on the whole will be increased, first, by the process of eliminating the most unfit. We have done it right along. We have constantly taken steps which lead towards progress in the usefulness of the products of industry.

Question: You made a statement that a sense of responsibility implied the opinion as to what an imaginary gallery would think of your action. It is not unnecessary to assume the idea of an imaginary gallery?

Mr. Dennison: To my mind it is quite necessary. It seems to me (and I put the thing, of course, as an amateur, very tentatively) that the most powerful and most common actuating motive of a man who is doing his duty or, as we may say, discharging his responsibility, is the imagined approval—(if he is playing to a real gallery, we are on to him at once)—of an imaginary gallery. One might say the more imaginary that gallery, the higher the tone of his action. When I have tried to probe a man with: "Just why did you do that?"—again and again he has come back with the reply that if a certain crowd of fellows did know this they would approve of that type of action. It seems utterly necessary to save one's standing. It seems as if the best actuating motives in life might be broken down if it is lost.

Dr. Person: What is service, what do we mean by it, and how do you arrive at it?

Mr. Dennison: I suppose we mean by it man's attempt to help his fellow man.

Dr. Person: Assuming your definition might be that what establishes service as service is the net judgment of the community, how important is complete information as to an adequate judgment of what constitutes service?

Mr. Dennison: I think it is of great importance, and it is a normal, natural and necessary part of general education that we should begin to see more clearly into the effects of these things which we have been using. Progress will probably be largely through that education.

Question: If management must accept the status of the professions, can you tell us from which of the existing professions you would draw, or how you would define the status of the new profession?

Mr. Dennison: I should take the best from all. A profession must be based, first, upon scientific knowledge and trained intelligence. Second, there must be the open book. If an activity is advancing toward professional status, the details of the technique of that activity should be more and more open and public property. That step is being taken to a small extent in business. I think J. P. Morgan said that business would soon be done with glass pocketbooks. Third, there must be a code of ethics. Fourth, a motive of service to mankind. And, in any final stage of professional status, some public recognition, like a state license for practicing medicine—like a license for practicing law—will be necessary for that exercise of business management which controls and correlates thousands of business activities. Note, I am saying state recognition, not merely requirement.

Question: In urging the importance of service as a motive in industry, do you suggest that to do the decent thing in the management and administration of business involves sacrifice to the capitalist as compared with the average standard of today?

Mr. Dennison: 99 times out of 100 the reverse. Personally I know from experience in dozens of ways that what is commonly known as the decent thing is by all odds the more profitable thing, if you count your profit in long-time terms. If you are going out to be rich this year, be just as crooked as you can. If you are counting on making the most between now and 1936, then the straighter you pull and the broader account you take of the respect of other people and of doing the decent thing, the better.

Question: Is there any great difference in the long-run between the service motive and enlightened selfishness?

Mr. Dennison: No; selfishness must include service, if you are to do the best for yourself thirty years from now. If you won't include service, I do not see how you are not going to be dead broke. I think the two are practically the same, though we have in the past regarded the dimmest kind of selfishness as enlightened and gone ahead cheerfully with our old economics of twenty-five years ago. We did not seem to mind how dim the enlightenment was.

Question: What would you say as to the employer in Dr. Carver's line of talk that the present economic system, the present system of motives that drive people, carries within it its own apparatus for correction?

Mr. Dennison: I should say, and expect to say two weeks from tonight, many times over that he is part right and part wrong. The difficulty with the statement is that it is a dangerous doctrine to preach. It is too comfortable.

Question: I should like to quote one of my pet sentences from a biologically minded economist, namely, that "environments as well as people have children."

Mr. Dennison: If Dr. Caldwell is not right I am going to resign from this world of woe—there ain't going to be any fun in it.

Question: I assume that you would not take the responsibility of calling further attention to it, if you did not accept it, and personally I agree with it. I do not see why it should be otherwise. Let us take the other side of the subject for the sake of argument; if biology is so important, in two or three generations you will be able to produce almost anything biologically.

Mr. Dennison: But you cannot politically. Of course some of the chaps who take the black view say that this artificiality which we have introduced into natural life, by this device we call civilization, is working for reverse selection. That is, we take care of the unfit and in every direction of civilization are working for antiselection—selection for the worse.

Question: I asked our works physician about Wiggam's statement that less people are dying from tuberculosis in the active stage, yet far more with a tendency towards it—an increase of people who are weak, with a tubercular tendency—even though less deaths.

Mr. Dennison: Let them think a bit deeper. An experiment was carried out in Framingham.[1] What happened looked like that, because they discovered when they started ten times as much incipient tuberculosis as had ever been discovered anywhere else, and they reduced the death rate. Now the reason was that intensive skill had been applied to diagnosis, and so we recognized more tuberculosis in the early stages. We know now ten times as many incipient tuberculosis cases as we knew about before the Framingham experiment, yet we have no more of them. That is extremely hopeful, because it is easier to handle incipient stages, and one of the things that will reduce the death rate is that we can recognize the disease early and treat it more effectively.

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[1] For full report see *Four Years of the Framingham Demonstration*, "American Review of Tuberculosis," February, 1921.

XVIII

PRACTICAL APPLICATIONS OF SCIENTIFIC PRINCIPLES TO BUSINESS MANAGEMENT: THE ECONOMIST

By Henry S. Dennison

This evening I will consider first some incidental points which Dr. Carver mentions in the course of his lectures and upon which the experience of our Company may be of interest.

As one such instance, we have paid pensions over a period of at least thirty years, but never upon a set system. At bottom, our business reasons for any interest in paying pensions are, first, that it is absolutely necessary from every angle of good management that men and women should be removed from the organization promptly when, all things considered, they are no longer a net help to it. Second, general opinion within and without the organization is such that when a removal results in more than a certain amount of pecuniary hardship to the individual a serious and practical damage accrues to the Company's good-will account. Systematic pensions sometimes meet such a situation and sometimes not. The individual case has to be looked into anyhow; so we meet the needs of individual cases on no set system but at appropriate ages with appropriate payments, and so far with nothing but satisfaction all around. Pensions, therefore, we count not as a deferred wage but as a payment on Good-will Account.

Dr. Carver, I believe, is right about that vague and useless term "industrial democracy." The only practical idea we can get out of the words is the value of an afferent sensitiveness, which we could get without using the phrase "industrial democracy" at all. We at home taboo the words because they mean so much and so little. But we dig like Indians to acquire the sensitiveness both ways—management towards employees and employees toward management. But as to just how to do it, Dr. Carver does not help us much. His statement that a joint stock system is democratic down to a certain

level is to our minds simply another example of the easy confusion to which the word "democracy" lends itself.

Dr. Carver mentions a suggestion box as a possible help in developing a democratic sensitiveness. We have had a suggestion system since 1901 with, on the whole, increasing success. Last year was our best year—out of over 4000 suggestions made by 1000 people 1150 were accepted. We think that, by and large, while the actual value of the suggestions accepted more than balances the costs and awards, by far the most important advantage is the habit of mind the system cultivates; the habit of reaching for new ways and new things and of accepting continual improvement as the normal mode of life. We have had almost no suggestions of a critical or, as one might say, political nature in spite of the variety of assurances and safeguards we have provided. We do not believe writing out suggestions for the suggestion box is a natural way of expressing views of a general sort—critical or otherwise—but is more suited to specific thoughts concerning mechanical and material things. Suggestions, we believe, offer a real outlet for an expression of the incipient managerial tendency inherent in many people, especially as it applies itself to their tangible environment. We have not, however, in nearly twenty-five years found that they acted like afferent nerves to increase our sensitiveness.

Dr. Carver is very clear in his statements that when labor is not in abnormal supply it can best be treated as a commodity. We have recognized for many years emphatic statements that labor is not a commodity as either natural selling talk of labor leaders, or else as the result of a confusion of labor with the laborer—who, of course, since 1862 has not been a commodity. A further point of some suggestiveness has recently been raised in an analysis of this question by one of our men. Those activities of workers which are measurable, repetitive, routine, are the ones most conveniently treated as commodities. The upper reaches of artisanship, of creative and original effort would best be regarded as something more than a commodity if the highest results are to be expected.

In his third lecture Dr. Carver mentions a danger that might develop in industry, namely, that the joint stock company may create a situation of absentee ownership comparable to absentee landlordism

in agricultural affairs. Our company, as a whole, has never had to suffer from this very real evil; we had a sufficient taste of what it can be like once when the head of the Company in New York took active charge of the factory in Framingham. The number of lies correct figures can tell—and the additional number they can be made to tell—and the difficulty of understanding moving, changing, dynamic affairs except within shooting distance of them, so impressed us that we are not likely soon to forget. In managing the selling division, for example, we travel very freely, preferring to lose a dollar in travel expense rather than two in errors of partial understanding. And so far as mere "balance-sheet management" goes we are, we hope, entirely free from it; and likely to remain so if our partnership plan wins out.

But there is a good occasionally arising from the joint stock scheme of things, which we are determined not to miss. Fresh blood and fresh and broad points of view may sometimes—even if rarely—come from changes in voting stock control. These we are trying to get for ourselves by circulating about among other companies and in conventions more than may be immediately profitable, and by a more than ordinary emphasis upon continuous education, with an occasional taking-on of a man not of exclusively Dennison up-bringing.

Our Dennison quarrel is not with joint stock companies as such; far less with the capitalistic system as such. We are a joint stock company and confess to the use of capital. We reincorporated in 1911 as a practical expression of our quarrel with—indeed to escape from—a voting system which fails of any sufficient correlation of power with responsibility, knowledge, or selfish interest; a system in which anyone with the cash—and sometimes with only brass—can buy a vote and sell out from under the consequences of its stupid or crooked use. The selfish interest of the holder of negotiable common stock is not hooked up to the permanent success of the company; it may run with it or exactly opposed to it, as a variety of accidents may determine. In our case, since 1911 the stock with variable dividends, or the stock with voting rights, can be held only by those who have been in our employ for at least two years. It is non-transferable and non-assignable except to the Company upon leaving its service, and can be acquired only as extra remuneration for service given.

In instituting this system we violated an injunction in Dr. Carver's fourth lecture, not to invent new ways by which workers can acquire shares in an industry. But our invention was to remedy for ourselves two elements of the capitalistic system which had been to us the causes of material risk, worry and cost—the unending increment of surplus to common stock holders and the powers of voting given them regardless of the possibilities of the efficient exercise of these powers.

Dr. Carver finds in his third lecture that there are two phases of the capitalistic system, more or less connected with the joint stock method of ownership, which are the causes of the irritation against it. "If most of them can be removed," he says, "I am inclined to believe people will come around to the conclusion that the capitalistic system is pretty good after all." These two phases are given as (1) the inevitable tendency for management to become impersonal and (2) the temptation of powerful organizations to be carried away by their consciousness of power.

Now to me neither of these two phases presents a fundamental problem for the capitalistic system to solve. Much more fundamental are the problems which arise when common stock dividends get beyond any correlation with risk or other gauge of appropriateness, and the problems which arise from the fact that the voting function is free from any necessary relation to special knowledge or consistent self-interest. For corporate voting, in almost direct antithesis to political voting, has neither an educational nor a residential, but only a property qualification. Experience has shown the American business man nothing much beyond technical difficulties in learning how a large organization can run effectively and humanely; and in fact in Dr. Carver's first lecture he calls attention to certain very real advantages of impersonal government. Furthermore, we cannot from our experience feel any fear that the abuse of great corporate power will ever be more than a minor and temporary disability of the capitalistic system; except in a political absolutism such power can be sure it will sooner or later meet a check through political or economic expressions of public disapproval. But to meet the dividend and voting problems we had to reconstruct our corporation.

Dr. Carver believes the faults of the present scheme of things to be relatively superficial and practically certain of speedy cure if we allow

nature to keep on its present course and avoid special inventions and interventions which could disturb its course. Then why does he believe elaborate defense of this system so well worth while—for most of the specific points of his lectures are in defense of capitalism. In the passage I have just quoted, he says that with the removal of those phases of the system "people will come around to the conclusion that the capitalistic system is pretty good after all."

Now I start with opposite presuppositions. I believe that a large majority of people accept it *now* as a pretty good system; certainly an overwhelming majority of those in any position to translate their views into significant action do. And this belief of mine obviously joins with the belief that there *are* things we can do to help progress; that the system is not wholly a "self-righting system;" that there *are* possibilities of better understanding and adapting to man's real advantage the forces and resistances in the field of man's economic relationships—chances for social invention. Even if the economic foundations were primarily dealing with "the relation of cause and effect rather than with human instincts and passions," the history of progress in the fields of physics and chemistry would make it seem most improbable that the joint stock company or any other device could be the last word beyond which no major invention is possible.

We do not need to *defend* capitalism but, freed from the shackles of the defensive attitude, to analyse it and help progressively to amend it as needs develop and knowledge grows deeper. For one who accepts the hypothesis that the present capitalistic system offers significant opportunities for deep seated improvements, and that such improvements can be hoped for only if some men purposely and studiously analyse and carefully experiment, after the model of chemists and physicists—for such an one a case in defense of capitalism is worse than a waste of human energy. It is a distraction of attention from the directions in which betterments may best be attempted, and it is an invitation to take the easier and smoother course of "laissez faire."

Such a defense might be justified by the fear expressed in Dr. Carver's statement: "Because labor has been oversupplied in the past and, individually considered, laborers were more or less superfluous, they had to take what they could get. That put them, of

course, in a bad situation. It was perfectly proper, at that time, to think of them as being in a hard position, needing more care than other classes. The time is coming, I think pretty rapidly in this country, when that condition will be cured. I fear that in spite of this fact we will still continue in our old habit of thinking of labor as being exploited when *we* may be the exploited; as being in a weak when it is in a strong position; as needing sympathy when it may need none whatever; or as calling for some kind of governmental policy which we would not apply toward other people. This fear of mine that the old habit of thought will persist, points directly at the problem confronting us." But considering the recent history of Russia, Germany, Italy, England, and the United States, it is hard to imagine from what source such a fear can arise in a scientific mind.

My dissatisfaction with Dr. Carver here, you see, lies not so much in what he says as in the reasons and the presuppositions behind what he says. Let me take another example. In the third lecture he says: "I think the only method that will ever get workers and owners united in industry is by actually doing the work together; investing in the same shares; managing the same industry; doing things together. That will unite them and they will become pretty good friends before they realize." I agree with this statement. But I read it with views so colored by my contact with industry that the four words "managing the same industry" seethe with difficulties and possibilities, fears and hopes. Yet to Dr. Carver this means clearly little more than the exercise of such voting rights as inhere in the shares of stock which owners and workers have bought. He says that the "simple matter of labor participation in management" will come about sooner or later automatically, and clearly believes it will come through the relative scarcity of labor, its higher wages and consequent investments.

Now the manual workers of our company through their elected representatives expressly stipulated that their stock should not carry voting rights, because it gave them both too much and too little; so we can hardly agree with Dr. Carver's implication that investing and managing come to much the same thing. Management to these workers' representatives as to me is a very real and definite function. It is simply not true that capitalists manage if they merely hire management, any more than that they labor if they hire laborers.

Anyone who has had a glimpse of the inside workings of stockholders' voting will seldom claim that in the ordinary view of things capitalists as such, and in proportion to their holdings, really even hire management. Both management and employees in our Company recognized the possible effectiveness of their direct sharing in such problems of management as directly touch them, and the total ineffectiveness and consequent dangers of their voting for men they could know only very imperfectly to fill directors' positions, at whose exact requirements and possibilities they could only remotely guess.

As a consequence, our working out of the problem leads along a thorny and difficult path of complications and nice distinctions—of works committees and joint committees—but faces frankly what we cannot see as other than a complicated situation. To our minds Dr. Carver has oversimplified the picture and to our way of thinking he has taken the life out of the word "partnership." He says: "Any ordinary man becomes a partner in industry through buying an interest in it." Now partnership to us means immensely more than this. For one thing—you cannot sell it at will nor buy it at will because it is a mutual relationship; a relationship of humans not of dollar bills; and for another, it includes playing a part in the game—not merely buying a seat. Dr. Overstreet's point of view, you will remember, is that at present it is the ownership concept which stands in our way and which must be transcended. Now I am convinced that employee stock ownership has great possibilities for good and for evil; but that the latter can be mitigated or avoided if it is subjected to unbiassed analysis and some implications of the older concept of ownership transcended. But I am also convinced that it cannot be depended upon as if it were anything like a panacea. This opinion I state as a conviction—a very careful and somewhat confident guess; no one can give it scientific proof or disproof.

There is another difference in the presuppositions underlying Dr. Carver's lectures and those which the experience of our industry seems to make necessary. He begins his fourth lecture with a statement of the need of changing our whole attitude towards the labor problem and of getting over the notion that the laborer is to be treated in any way different from other people. I agree wholly. But I believe that, except for some notorious and dramatic but quantitatively un-

important examples, laborers are still too powerless, too much ruled by compulsions and caprice, and have too little of the opportunities and status due to citizens of industry. Dr. Carver says they are babied and not held responsible. He speaks of a kind of pity for labor which comes from a feeling of superiority. Undoubtedly there is such a brand of pity, but could a social scientist regard it as a significant social influence? Some laborers are babied. I feel sure of it simply because there is such an endless variety of situations in this complex industrial world. I do not know of a case, unless babying is made to include a forced yielding to the demands of some particular labor monopoly. If that definition is accepted we must confess to babying a few capitalists, as well.

I believe it no exaggeration to say that five-sixths of the time a decided balance of power in the business world lies with the employers. Whether or not it is best that this should be so I am not now interested to argue; but if it is so, it makes it a matter of more concern to us that employers should be held to their responsibilities than that laborers should be held to theirs. Dr. Carver says: "Laborers will learn more about business and its management. Besides, it will bring about a better understanding between laborers and employers, when laborers have a little taste of the problems of the employer."

He implies that improvement must come on the side of labor; he does not say that employers need a taste of the laborers' problems. On the other hand, I assume that there are a thousand ways in which employers can take steps of social progress to any one which laborers can take; that rather more than any one thing, employers do need a better knowledge and understanding of the problems of the laborer; that from stock ownership alone laborers will learn very little that is important concerning employers' problems and will have still less chance to apply such knowledge. (On this account I value the work of Whiting Williams most highly.)

Consistently with his assumption that laborers are babied, Dr. Carver urges that laborers be held up to their responsibilities, but in the question period hesitates to demand that folk who have wealth or intelligence assume heavier responsibility on that account. Now any success of this kind with labor will have its principal effect in stabilizing the present state of affairs; any similar success with employers will set forward the progress which is possible.

I take issue squarely with Dr. Carver upon his assumptions that laborers are now in an equality of power with the employers for bargaining or for affecting the industrial system. And I am therefore not in full accord with the views concerning labor legislation, the treatment of labor by the courts, or on labor unions and the use of their dominant influence (which I seem to get by inference from these lectures).

Dr. Carver states that there ought to be a certain *noblesse oblige* among men of superior opportunities but feels that it cannot be demanded of them. Then may we here not consider ourselves of the employer or, at least, the pre-employer group and demand it of ourselves and of our fellows? I say we must and that every religion of civilization makes the demand a compulsion.

Now what can we make of this difference of opinion? Can we not examine this conflict in Miss Follett's spirit?

Let me show you these blue-prints. They are all abstractions of the same reality. Each is true so long as you do not claim it is the whole truth. Each is of importance. One is Veblen's point of view of the machine, another Carver's. Each brings out some clear incisive facts. Yet, to know the machine to any practical end, an understanding mind must—not add together, but as Miss Follett says—integrate all these partial views and include, moreover, the actual qualities of the stuff of which the machine is made. Dr. Carver's, I guess, is the ground plan; for his purposes there does not need to be considered the aerial jumble of non-economic motives, enthusiasms, and obsessions which so greatly affect social dynamics. For example I see no inclusion of the good-will accounts, internal and external, which so greatly affect business affairs.

From the angle at which his mind sees the social complex it is relatively simple and orderly and is running right. It is a quieting view, leaving us in fact nothing to do about it but to follow our best interests, save and invest.

It is one projection of the Great Society, necessary to a full understanding and corrective of and supplementary to other views and projections. But it is a restful view and cooling to the enthusiasms. Those of us who would rather pull our weight on the trace of progress, whether the old world budges a bit or not, will turn to Miss Follett with a gladder heart.

DISCUSSION

Question: Is not part of the trouble with Dr. Carver's line of thought his apparent assumption that anything which survives in the economic system thereby justifies itself; that anything which cannot be justified will fail to survive? He does not take account of the margin between being able to survive, on the one hand, and not being good enough to make an improvement at the upper level.

Mr. Dennison: The first half of your statement is an excellent summary of his position as I see it. It has been a traditional view from time to time of some who have gone into the field of economics. Each seems one after another to have accepted the situation which had developed in his own time as if it were perfect. As you say, what had survived therefore had proved itself to be the best possible situation. I think in Dr. Carver's paper his whole theory is that what is, is right —with a few minor exceptions which seem to be correcting themselves.

Question: Is it not also a fallacy that whatever is wrong will not survive? Civilization today is so complicated that things which in themselves are perhaps extremely inefficient or wrongly planned have yet ways of surviving, just as the individual who may be very poorly equipped physically may survive because doctors help him do so, or for other reasons.

Mr. Dennison: As soon as one uses the words "right" and "wrong," he should look out for a very serious dilemma; to say that what survives is "right," is simply another way of saying that might is right. It is difficult to see perhaps how we could get along very effectively if what is right cannot survive. Nevertheless, if we indulge in an ethical point of view at all we have to admit that even this is possible. But that does not knock out an ethical system from consideration.

Question: Just what is the reason that the representatives of the lower strata of workers in your Company decided against purchasing stock that carried the voting power with it?

Mr. Dennison: The whole set-up was quite a bit different from the usual case. We had had established since 1911 a partnership plan which put the control of the Corporation entirely into the hands of the principal employees or managerial employees, roughly speaking about 8 per cent of the total. The Works Committee was established in 1919 and undertook an examination of that scheme of partnership at once. A sub-committee, elected from the Works Committee by the whole body of non-managerial workers (those not included in the partnership at that time, the 92 per cent), worked out a plan that winter, and suggested that the 92 per cent also be included in the type of plan which we had for the managerial workers. That plan is a distribution each year of the surplus after dividends, not in cash but in new stock issued each year. They suggested that they should get a share of that stock, which between 1911 and 1919 they had never

had at all. As it finally was worked out, one-third of the surplus goes to the non-managerial workers and two-thirds goes to the 8 per cent, the principal salesmen, principal foremen, whom we call management. There is no purchase to it. It is a bonus, exactly the same as any other bonus, although not declared in cash. It is given in a non-transferable stock. The non-managerial group immediately and on their own action, without consultation or any influence on our part, without our knowing anything about it as a matter of fact, asked that they share not in exactly the same stock as the managerial force had had for seven years, but in a new kind of stock. They asked that a new stock, carrying the same dividend and the same conditions precisely, be issued for them but without voting powers; because, they said, we have no opportunities to know how to vote for directors or on general policies of the concern, and if we have not the opportunity to know, we do not want the responsibility. They were very very definite. They did not want to vote on the general policies of the concern. Why should they? They said: "We want our share in the management through the Works Committee. We have got it. We have precisely what we want. We do not want to vote on directors whom we could not possibly know. If we voted for those we know, we would fill the Board with factory people."

Question: That decision was taken in 1920, was it not? Since that time your Works Committee has been in effect for four or five years. It is not conceivable that experience with the Works Committee might give them the added knowledge which would enable them to vote intelligently for directors? Would you anticipate they would be interested in doing so?

Mr. Dennison: I do not believe so though, of course, I do not know. An added opportunity to know the officers comes from the incidental fact that it is customary for some of the present officers of the Company at two or three sessions a year to talk before the sixty members of the Works Committee, to be questioned by members as to their duties in the concern. The stock is distributed among two thousand people who practically never would get any opportunity to know anything about the people for whom they were voting.

Question: Is there any indication that the Works Committee might think it should be permitted to elect one or more members of the Board of Directors?

Mr. Dennison: Not in the least. My bet would be twenty to one against it, certainly for the next fifteen years, and that is pretty long. None of us, no members of the Works Committee that I know, none of our group get any kick out of the idea of one representative of theirs serving on the Board of Directors. They do not want it. The Board of Directors does not interest them. We have no investors' representatives or public representatives. We do not handle wage questions in the Board.

Question: The problem I have in mind is a situation where the directors are not responsible to anybody, for example, in a large life insurance company, formerly a stock company and now mutualized, where the policy holders are supposed to vote for directors. Of course this is physically impossible, and the result is that officers and directors become a self-perpetuating body with no responsibility. Is not there a distinct tri-lateral problem which might prove serious?

Mr. Dennison: To give an exact answer would be unwise. I would simply say there are possibilities in the general direction of forming a policyholders' representative committee, who should be induced to take a close interest and acquaint themselves as representatives of the policyholders with the situation, so that the propositions of the Board of Directors would be made with the knowledge that somebody is going to be critical; somebody whose interest is involved and who is in a position to exercise an *intelligent* criticism. There may be a better way out than that.

Question: Is not your problem of stock ownership among employees on quite a different basis when banking interests are the controlling interests? The people who issue credit have to be considered as factors in the industry, not in regard to companies who finance themselves out of surplus, but for those unfortunate people who have to borrow. The bankers have to place some limits on their government.

Mr. Dennison: They must exercise some control so far as I can see in any system which is in more than normal risk of failure, while risk is a very serious factor. Almost all industrial beginnings would probably be under very strong financial influence, if not under complete financial control. Yet there is an immense amount of financing without any control at all. Financing without a vote has become more or less common since 1907, when non-voting preference stock came into the market in quantities. Most of the bonds issued never expect to have anything to say, and hope they never will, and an immense quantity of preferred stocks have no vote. The appropriate thing is an enhanced influence on the part of investors as long as that is needed. But other arrangements should be made after the abnormal risk period is passed.

Question: It might be well for us to keep in mind one point in Professor Carver's thinking. He has written a good deal about conservation of energy. He talks of economics, of the transmutation of physical and other energies, and says that economics is not concerned with psychology. Economics is concerned with the most economic thing today which to me is the most energy-saving thing today. Now he starts from that point. It is the conservation of physical- and there is no socalled spiritual-energy involved in his thinking there. I agree with you, but cannot agree with him.

Mr. Dennison: We must be very careful that in the saving of what he meant by energy, which you express as physical energy, we do not lose all that is worth while in life. Of course, I should have a deep seated quarrel with his statement that economics had nothing to do with psychology, only that is on his battleground and not mine. He is an economist, and I am not. The whole assumption of the purely economic man is perfectly allowable, if you keep on reminding yourself along your whole course of thinking that what you have made is an abstraction. "I am talking about an economic man which is a pure abstraction. He is a lot of other things besides an economic man; but I would prefer to follow out what happens when I think of him merely as an economic man." It is perfectly allowable, if you are going to get some partial pictures of the social complex. But you have to keep talking all the way through, "now, do not forget this is not life; there is no such thing as an economic man." And you must not bring your abstraction back into the business world and say it has anything to do with it at all. There is 95 per cent psychology and 5 per cent economics. That is true. That is not stretched.

XIX

PRACTICAL APPLICATIONS OF SCIENTIFIC PRINCIPLES TO BUSINESS MANAGEMENT: PSYCHOLOGIST AND INDUSTRIAL ENGINEER

By Henry S. Dennison

I am quite sure that I could not improve a bit on Miss Follett's work by writing any summary of it. One of the very strong points of her four lectures is the way every once in a while she injects an apparently subordinate clause that has a most interesting significance, that throws a really brilliant light on some aspects of business administration. I am going to take her lectures, therefore, picking out certain sentences on which I can offer some special confirmatory evidence, or which I cannot help calling again to your attention because I believe they are so well worth while. You will gather that I can find nothing but agreement throughout the papers with Miss Follett. I am sure that these four lectures of hers constitute as valuable a contribution to the topic given to her as anyone could well have made. Of course, I glory in the frame of mind—what she herself calls the experimental frame of mind—all through, which to me is a delight. In so far as those of us who are in the midst of business administration can hold it, it constitutes a most hopeful factor. If we can regard our great engineering project with an open mind, we can fight our way to a status of business management that will be immensely higher than what we have today.

I take from her first page the following lines:

> I should like to ask you to agree for the moment to think of conflict as neither good nor bad; to consider it without ethical prejudgment; to think of it not as warfare, but as the appearance of difference, difference of opinions, of interests. For that is what conflict means—difference. We shall not consider merely the differences between employer and employee, but those between managers, between the directors at the Board meetings, or wherever difference appears. As conflict—difference—is here in the world, as we cannot avoid it, we should, I think, use it instead of condemning it, we should set it to work for us.

There is a typical engineer's attitude. We have conflict with us. Let us not snivel about it. Let us see if we can turn it into some channel or other where it will serve, or at least where it will not interfere. She notes, as you remember, three ways of dealing with conflict—domination, compromise and integration. Domination she spends little time on and we need spend little time on it, except perhaps to say, as she herself has said, that a temporary settlement by domination may be at times used to give us a chance to take our breath. Practically always a settlement by domination or compromise is only a truce and leaves a further settlement to be sought out sometime in the future. Miss Follett continues:

> If we get only compromise, the conflict will come up again and again in some other form, for in compromise we give up part of our desire, and because we shall not be content to rest there, sometime we shall try to get the whole of our desire. Watch industrial controversy, watch international controversy, and see how often this occurs. Only integration really stabilizes.

But integration really means an analysis of just what it is that is wanted on each side, a dividing up of what seems like a single unit of total desire into its parts, so that you can get the chance to find the common factors and revalue the various parts of the total desire. In other words, she asks in meeting conflict that we analyze, revaluate, and then reorder the parts of the total desires into some new arrangement. Now that is invention; it is precisely what we do in chemical or mechanical invention, which almost always consists of an analysis and rearrangement of parts, and a new construction out of the old pieces.

I have one illustration of an integration that I think may be of interest to you. In 1920 we were giving our managerial partners, who up to the beginning of 1920 were the only partners we had in the concern, the maximum discount on the goods they purchased from us, just as we had given it to the family and the stockholders in the old days when they came into the store. There was no special reason for it and no special reason against it. When some 1500 manual workers joined as partners in 1920 they had a Works Committee, through which they could express themselves. They wanted to know why that discount privilege should not be extended to them, or why there should be a difference between one partner and another partner in

that respect. So we took up the problem with a sub-committee of the Works Committee. On the one hand we were giving to managerial partners forty per cent off, which is the maximum dealers' discount on our stock goods. We were giving no discount at all to the employee partners or manual workers. Well we fought it out back and forth and we agreed with the sub-committee concerning one element—it was at least one step ahead—that there should be no distinction between the two groups of partners, we decided that all should get the discount or that nobody should get it. So we cut the discount off from everyone. Two years later the question recurred and some reasons were shown why those of us who wanted to buy our Dennison goods at the factory should have a discount; so we went deeper into the matter and cut it up into different elements. Out of the discussion came the fact that it was pretty extravagant to run from the main office, where they might order anything, away up to the stock room. Even if they paid list price it was a question if we did not sustain a loss on every one of the petty retail orders filled that way. So we worked out the idea of ordering at fixed times three days of the week; arranged that orders must be placed in the forenoon; that goods would be ready at the noon hour and could be collected by the persons as they went out. We also worked out from some elements of cost that a reasonable discount would be twenty per cent. Of course this discount would extend to all partners. That came as a very satisfactory solution of the matter, saved us unnecessary waste of money and made the whole system rational and worth while. We had worked out an entirely new arrangement that developed through the integration of all the significant desires.

Miss Follett says:

> Thus we see that while conflict as continued unintegrated difference is pathological, difference itself is not pathological. . . . . What I think we should do in business organization is to try to find the machinery best suited for the normal appearing and uniting of diversity so that the difference does not stay too long crystallized, so that the pathological stage shall not be reached.

She shows a very keen insight into some of the difficulties in business administration, very seldom recognized by business administrators. The stage to which a normal difference is allowed to go is a matter

of very great importance. If you catch them young, the differences fit into themselves and, as we say, disappear. They do not disappear, they much more nearly, as Miss Follett says, integrate. Now we found that out ourselves in about 1909 or 1910. There were vital differences then between the selling department and the manufacturing department. These differences, misunderstandings, would grow and become almost insurmountable. So we brought the headquarters of our selling department to Framingham right into the factory. At that time it was decidedly revolutionary, but when the early months of adjustment had passed we found ourselves getting into such close contact that different viewpoints were brought together at a very early stage when it was not hard to find ways to reconcile them. We seldom thought of compromising, but usually could find ways to meet all real needs. Criticisms starting at the very beginning of things had a constructive spur to them. They were an invitation to find solutions, whereas when they were allowed to stew they were an invitation to a fight.

I well remember about 1907 when a Chicago director used to come on to directors' meetings once every three months with a sheaf of kicks. I discovered that he had a pigeon hole in his desk; when any kick came from his crew in Chicago he stuck it in the pigeon hole. He did not send kicks on to us. He collected them. He thought they made a greater impression if he had a lot of them at one time, and they did. That is all they did—just made an impression. They were too old when we got them for us to do anything else about them but just be impressed. Now that is an illustration of the uselessness of difference—conflict—when allowed to develop to the pathological stage. Our own experience of bringing the principal management of the whole concern together in one place so that they might daily, hourly, deal with their differences of views, has shown such immense advantages that nobody in the whole concern would ever dream now of working in any other way. The same thing has been the experience in a number of other concerns. Even when they have had their principal offices in one city—the financial office in the financial district, the sales office in another district, and the factory office at or near the factory—they have had internal conflict and cured it by getting all into the same building.

As a side light on the moderation of Miss Follett's point of view, I commend her statement: "I do not think integration is possible in all cases." Of course she is perfectly right, but not so many pioneer thinkers care to admit any exceptions.

Her first suggestion as to methods of reaching an integration is, very properly, to bring all differences into the open. "All cards on the table" has become accepted as good doctrine now, I think, throughout the business world. It was a long way from acceptable a dozen years ago. Now, although no one can say it is common practice, it is at least commonly accepted as good practice that all the elements of difference and of the whole situation in which difference grows up, should be brought out into the open. The same practice is coming to be more and more recognized as wise for our relations with customers. For example, it is acknowledged that where it is possible an open price, that is a one price policy, is extremely well worth while. Customers feel that they know the whole situation and they develop out of that feeling some of that confidence which is one of the best elements of good-will. One of the strongest points, I think, of a one price policy is that potential differences, possible misunderstandings, are cut off at the beginning by an acceptance of the fact that the price policy of the company is known—that there are no special secret handouts and rebates.

Miss Follett notes: "Wherever you have the fight-set, you are in danger of obscurities, conscious or unconscious." Now truculence, the ultra-conservative attitude and the self-defense attitude, are best served by obscurity. Obscurity is one of the great tools of war; to deceive, to hide the facts, is in war one of the first necessities. In constructive work obscurity is one of the first handicaps to be swept out of the way. Miss Follett says:

> In business, the employer, in dealing either with his associates or his employees, has to get underneath all the camouflage, has to find the real demand as against the demand put forward, distinguish declared motive from real motive, alleged cause from real cause, and to remember that sometimes the underlying motive is deliberately concealed and that sometimes it exists unconsciously.

Later on she refers to much the same subject under the title of symbols, but I think that one experience we had may as well be told

here. A group of our employees, in 1921 or 1920, came in to the factory manager with a demand for an increase of wages. There were 12 or 13 men. The manager was a good deal puzzled because the figures were pretty well known. He thought that wages could not be the underlying difficulty; for our men were getting generally higher wages than other concerns were paying and knew it. But the manager did not say what blame fools these fellows are. He thought, there is something that fetches them up here to the office. If I remember rightly, it took more than three-quarters of an hour to find out. The manager let them talk until they got absolutely talked out and he let them talk themselves out. Then the real basis of their irritation began to appear. They were very much disturbed—mad as wet hens—at the way the department was being run. They were under ragged and irregular management. They said they would be sent 'way down to one part of the shop on a job and then would have to go all the way back after their tools, often taking twice as long in doing a job as it should require. They said themselves that ten men could do the work of twelve under well managed conditions. They very gladly acknowledged that was the case. They very much preferred to have it that way. No one, certainly not men of their caliber, likes to work under such unsystematic, disorderly conditions. We took hold of that situation, cleared it up and unquestionably reached a real demand which was satisfactorily solved. This demand was unconsciously translated by them into the normal kick that always comes to everybody's mind, that is, more wages. I think it would be found if we could do enough psycho-analyzing in our industrial troubles that the demand for more wages is sometimes merely the symbol and expression of a far more serious demand for an improvement of conditions.

Now for a practical illustration entirely outside the field of industrial capital and labor conflict. We have quarterly, and to a more intensive extent annually, to decide on the details of our investment in machinery. We have a varying fund to reinvest each year for growth and improvement in our machinery and equipment, but our list extends over a very wide field of goods. We are really running four or five factories, not one, and the fund has got to be distributed over demands which are almost always greater than the amount of

the total. The Facilities Committee do a real job of cutting up the demand for this and that and the other sort of machine into its different elements. What do we need this for, economy or larger output, and so on? Then they compare the need for this machine against the total field of need for all the machines. Before the balanced program is finally achieved, they have put in a great many hours analyzing and comparing needs.

In Miss Follett's words: "We often think it is a question of eliminating motives when it is only a question of subordinating them." Now some of you may remember, I spoke of that in relation to the profit motive one or two lectures ago. I do not myself believe we will find our way along into a finer status of business management by eliminating the profit motive, but I think or hope that it will be put into its proper relation to other motives. We find means in our directors' meetings to satisfy the needs of the factory, the foreign sales department, the domestic sales organization, yet practically never by eliminating any real needs; rather by putting them into integration in proper proportion. Most often we get our best results by actually discovering a way in which they can all be met.

Miss Follett calls attention to a point which ought to serve us as a warning more often than it does. *"To find the significant rather than the dramatic features* of industrial controversy, of a disagreement in regard to policy on Board of Directors or between managers, is essential to integrative business policies." It is, of course, extremely easy to recognize the dramatic. I know that one of our great difficulties in the problem of prompt delivery of special orders, which is a problem with us always, comes in the fact that a very powerful and eloquent and recent appeal or complaint on the part of one customer will hang on for weeks in the minds of the selling department, and make them believe that we should get more equipment to have prompter delivery of goods. The exceptional case, if it has dramatic power enough, again and again gets in our way. It is only by a thorough-going analysis, by statistical valuation, that we can get away from the undue influence of the especially dramatic.

Miss Follett gives a warning useful to any scientific approach to business problems when she says: "Every day we use many more not-

understood symbols, many more whole-words, unanalyzed words, than we ought to. Much of what is written of the 'consumer' is inaccurate because consumer is used as a whole-word." We have more often found a way out of difficult problems by cutting up into its parts some "whole-word" that we were using than by any other method. "Dealer" for example is a very easy word to use—"sales to dealers, sales to consumers, sales to jewelers," are our usual phrases. And yet the dealer is every conceivable sort of a person. The problems that apply to the department store, the problems that apply to the drugstore, the problems that apply to the country store, are entirely different propositions. We talk again and again about "stock goods." I remember a few years ago a regulation was made in regard to "stock goods" on the assumption that it referred to those listed in the catalog; but some of those listed in the catalog, on which sales were uncertain, were never carried in stock. The regulation was ineffective until we cut the whole-word "stock goods" into its appropriate parts.

Miss Follett mentions further on the importance of anticipating conflict—anticipating differences that are likely to arise. Prevision is a major canon of the scientific code and business men already know how important it is to see ahead—to realize what types of conflict are likely to arise and try to meet them before they do. I think, the advertising of the A. T. & T. Co. is one of the finest examples of prevision of an almost inevitable conflict. The American public would normally set itself by the ears before it would show itself friendly to large corporations, regardless of the justifications of the case. The Telephone Company realized that that would be the case and that it could only be met by a sort of advertising, a putting before all the people persistently their common grounds of interest—their interest and the telephone company's interest in good service. The fact that they did it early was of tremendous value. If they had waited for conflict to crystallize, their advertising would have been a worthless alibi. We in our own case guessed right on the demand for the forty-eight hour week, for the law in Massachusetts was shortly afterwards passed, and we were ahead of the game; we did not wait to be driven into it. Of course, meeting in advance any labor difficulty is much more effective and allows an immensely greater range

of action than waiting for the active contest to begin before doing anything about it. As Miss Follett states, we have to prepare the way for response. We have to build up in a business controversy "a certain attitude. Of course every good salesman does this, but its necessity is not so fully recognized in other departments."

Among the difficulties of effecting integration, she mentions one which we should bear in mind—it is *easier* to fight than to suggest a better way. She mentions elsewhere that it is also more fun, there is a thrill to it, a decided kick in the fight. It is much more sober to work things out than it is to fight them out and very much more difficult. It is easier to dominate, easier to submit, easier to fight, than it is to invent; but in the long run inventiveness is the only thing of any real account.

Miss Follett says: "Another obstacle to integration is that the matter in dispute is often theorized over instead of being taken up as a proposed activity." We have found cases where we have helped ourselves out of problems whose answer we could not see at once, by making believe we were to adopt one of the possible solutions and going ahead on paper with the actual steps it would involve. This has put a case before us rather than a theory and has clarified the whole situation.

Most important instruments towards developing these integrations continuously are, I think, the committees that most concerns use a good deal now; committees on which men representing several points of view are put. Miss Follett calls attention to the extreme importance of developing the technique of committee work and the technique of chairmanship. It is a job as skilful as leading an orchestra, to bring out of a group of people all that they have to give and in such shape that it lends itself to integration, to the development of a new idea that will find a way out. Miss Follett thinks there should be classes in discussion which should aim to teach the art of cooperative thinking. I hope somebody will take that up and press it, for she is exactly right. Directors' meetings, committee meetings, meetings of executive groups, are going on at an increasing rate, and are increasingly necessary in business, yet their full possibilities are not met by simply getting fellows together in a room. It is worse than compromise to meet, "debate" and take a majority vote. An interesting book by Mr.

Hunt has come out on the technique of the larger conferences.[1] He has had much experience under Secretary Hoover, and has embodied in this volume all of the practical points which his experience has taught him.

Miss Follett's lecture X contains a code of professional behavior which she writes down unknowingly. She says, we should hold "a conscious attitude—realize the principles which it is possible to act on . . . ; a responsible attitude—decide which we will act on; an experimental attitude—try experiments and watch results. We might add a fourth step: pool our results." And she continues:

> The shrewd common sense of many a business executive has shown him that the issuing of orders is surrounded by many difficulties; that to demand an unquestioning obedience to orders not approved, not perhaps even understood, is bad business policy. Moreover, psychology . . . shows us not only that you cannot get people to do things most satisfactorily by ordering them or exhorting them; but also that even reasoning with them, even convincing them intellectually, may not be enough.

You remember that this lecture was on the subject of orders; what we really mean by giving orders. Hundreds of experiences in our past fifteen or twenty years back up her statement that there are difficulties surrounding orders not understood, not approved. We give them and that is usually the end of it. Many times not even a pretense is made at following them. I remember my first surprise at that. Orders to me, when I first came to work, had some sacred sort of halo around them. Think in some places how standing order No. 30307 is looked at with awe! Several years later I bumped into the head of the Composition Department and found him doing about anything he liked with respect to the sequence in which he took his special jobs. I had given an order a long time before and supposed, of course, that it was being obeyed by everybody. But the head of the Composition Department had no thought of following it. He had made an interpretation that suited him, had made a good rationalization—and then had carried out his business as he had always done. When I asked him about it he said, he thought that order referred to

[1] Hunt, E. E. *Conferences, Committees, Conventions; And How to Run Them.* New York (Harper), 1925.

occasions which did not occur in his department in the usual run of things.

Miss Follett says:

> For all our past life, our early training, our later experience, all our emotions, beliefs, prejudices, every desire that we have, have formed certain habits of mind, what the psychologists call habit-patterns, action-patterns, motor-sets. Therefore it will do little good merely to get intellectual agreement; unless you change the habit-patterns of people, you have not really changed your people. Business administration, industrial organization, should build up certain habit-patterns, that is, certain mental attitudes.

That brings in, of course, the time factor of which we are always trying to remind ourselves in business administration. We cannot change a situation to-morrow by issuing an order, by coming to a decision, or even by reaching a mutual agreement. Considerable alterations of habit-patterns may take years of reiteration.

Miss Follett says:

> If we apply this to the subject of orders and obedience, we see that people can obey an order only if previous habit-patterns are appealed to or new ones created. When the employer is considering an order, he should also be thinking of the way to form the habits which will ensure its being carried out.

Now that is absolutely sound. Order givers have to prepare the way precisely as a salesman has to prepare the way with his customer. If we once get out of our mind that an order is something with physical force behind it, we can realize that our influence with the employee, the foreman's influence with the employee, is not so greatly unlike the salesman's influence with the customer. Our relation to the employee in the shop is a good deal more a matter of influencing him to do something than forcing him. When we get that idea into our heads, the whole technique of man-handling that Miss Follett has dealt with through this paper is likely to be changed.

> It has been hard for many old-fashioned employers to understand that *orders will not take the place of training*. . . . . Many a time an employer has been angry because, as he expressed it, a workman "wouldn't" do so and so when the truth of the matter was that the workman couldn't, actually couldn't, do as ordered because he could not go contrary to life-long habits.

Further on she says: "The place in which orders are given, the circumstances under which they are given, may make all the difference in the world as to the response which we get." Posted orders are about the most ineffective things imaginable. To make an order in the privacy of the office and attempt to give it force by posting a printed notice is about the surest prescription that I know of, to have most people try to break that order. Suppose we post a notice that wages will be reduced to-morrow morning (and it has been done that way by employers). Men will feel it an insult and fight even if they bite off their own noses. They will fight because of the way in which that order is given. The more rigid and lifeless an order appears, the more ineffectual it is likely to be. Miss Follett speaks several times about the desirability of dealing with such matters at close range rather than at long range. "Probably more industrial trouble has been caused by the manner in which orders are given than in any other way." Bad manners of foremen cannot be made up for by arbitration. One of the most important problems we have is the whole technique of foremanship, the way in which instructions and orders are given, the way in which the crew is led and handled. She makes an interesting comment on the two extremes of too much and too little giving of orders by quoting a department store incident. You may remember the quotation: "Say Sadie, you're 36 aren't you?" And she asks:

> How can we avoid the two extremes, too great bossism in giving orders, and practically no orders given? . . . . My solution is to depersonalize the giving of orders, to unite all concerned in a study of the situation, to discover the law of the situation and obey that. Until we do this I do not think we shall have the most successful business administration. . . . . If orders are simply part of the situation, the question of some one giving and some one receiving does not come up. Both accept the orders given by the situation. Employers accept the orders given by the situation; employees accept the orders given by the situation. This gives, does it not? a slightly different aspect to the whole of business administration through the entire plant.

It does, for it has more nearly a professional aspect when we take action because it is right rather than because we happen to want to. And then she continues:

> We have here . . . one of the largest contributions of scientific management: it tends to depersonalize orders. From one point of view one might call the

essence of scientific management the attempt to find the law of the situation. With scientific management the managers are as much under orders as the workers, for both obey the law of the situation. Our job is not how to get people to obey orders, but how to devise methods by which we can best *discover* the order integral to a particular situation. When that is found, the employee can issue it to the employer, as well as employer to employee.

Now that is precisely one of the contributions that scientific management has made. To the extent that it exists in any concern it tends to clear up those old inherited notions of the boss as an autocrat; and of the man as without freedom, without responsibility and without opportunity.

Again, Miss Follett remarks:

I said above that we should substitute for the long-distance order the face-to-face suggestion. I think we can now see a more cogent reason for this than the one then given. It is not the face-to-face suggestion that we want so much as the joint study of the problem, and such joint study can be made best by the employee and his immediate superior, or employee and special expert on that question.

There is also a place for the use of advertising principles in factory management. The principle of repetition, the principle of preparing the mind to receive new suggestions in the transmitting of orders from superintendent to foreman and from foremen to men, are contributions from our advertising experience.

Miss Follett points out the fact that the situation is always changing. When an order is given in a changing situation, the order is likely not to be valid in a few weeks or a few months. That is one of the great difficulties of standing orders. They may be all right when issued, but they get worse as the situation changes. In huge institutions like the Postoffice, one of the great problems arises because it is difficult to keep orders up to date when the situation is constantly developing.

Miss Follett calls attention to the very widespread objection of workers to being watched. That we do not often appreciate fully. I ran across an extreme example of it in the Chicago Postoffice at one time where in a pressure of work with a new crew they had special foremen stand and watch the men at work. The men could feel these fellows looking at the back of their necks and it irritated them. The point, I think, is that we want to get our industrial system into such

shape that we should not need to watch the *workers;* we should watch the *work.* This gives a hint of a further value of such a record of the work as Mr. Wolf has called the "progress record," a device which watches the work without watching the workers. It offers a means of getting reasonable supervision without which we cannot expect to get very good results, yet without the drawbacks of too personal watching.

Again, I must repeat that it is after all to the real development of firstrate foremanship that we can most profitably put our attention. If we can get what we eventually must have, leadership in our foremanship, I think a great many of our present difficulties will be cleared up. Then the watching will take on perhaps more of the flavor of the watching we delight in. We love to be watched by an admiring aunt or a fond parent, and the left tackle on a football team does not object to being watched by the captain. If we can get more and more of that type of leadership injected into foremanship, we shall be a long way along towards meeting some of the most pressing difficulties inherent in the present system. We need to develop that and we need to develop the technique of communication. We have ourselves found a great deal of the difficulty with instructions, orders, decisions and mutual agreements, to lie in the inappropriateness of the language we used in communicating those orders or decisions or instructions. We know that we have not the ability to interpret as the employees interpret. We write the orders for ourselves—we write the instructions so that we understand, but not in the language of the person whom we wish to have understand them. There again is a situation where the advertising department can help. We have used our own advertising department a little in this way, to see that our instructions are put out in language that will be understood by the people to whom we send them.

DISCUSSION

Question: Is there danger in over-integration? Does big business as it exists, we will say in New York, require too high a degree of conformity?

Mr. Dennison: I think that may be the case but I should not call that *over*-integration in Miss Follett's sense. Quite the contrary. If there is a too great degree of conformity required anywhere it is *imperfect* integration. It is sending

out the wishes of, or the interpretation of wishes by one particular group and requiring everybody to live up to that, instead of taking into account the needs and the circumstances of other groups.

Question: Don't you think a great deal of trouble about standing orders is in the name and in the conception of them? If you call them and sell them as a description of the best current practice, subject to continual revision, are you not going to get better results?

Mr. Dennison: Yes, I think so. "Standard practice" is now frequently used. We are very careful to develop along with it the idea that it is subject to constant revision. We have been using "standard practice" for quite a number of years. I think it does not carry too much of an idea of stiffness. Still, I think your "current practice" an excellent phrase.

Question: Would you agree that the type of American business man, the successful type, is changing from the quick active man to the thoughtful, slow acting man?

Mr. Dennison: I think that is true. In the first place, this quick snappy action is better fit for a pioneering than an established stage of the game. And then more and more we are turning out from colleges into business men who have been trained in thinking things over. I admit it is only a guess. I do not *know* whether the change is taking place. I know that in my own experience the call for important immediate decisions does not come once in two years, and all this dramatic hammering on the desk and coming to a decision "just like a flash" may be useful somewhere, but we have never found it of any importance. I do not remember a quick decision my fellows have *had* to make in the executive offices. A salesman on his feet before a customer, or a manager in conference with a labor union official might sometimes have to come to a very quick decision as to what to say next. But I should state for myself that in the general run of work if we haven't had plenty of time to think things over, analyze and work out the best moves, it indicates poor planning.

Question: Not only a considerable part of Miss Follett's lectures and a good deal of what you have said tonight, but what I have seen myself in the current literature concerning deliberately arrived at decisions indicates such a tendency.

Mr. Dennison: Current literature will reflect the going situation. My point is that this scientific attitude of mind towards business problems is growing more and more. I do not believe that any observer could say it exists in the present business situation in any but a very small part; but it is a significant part. Great concerns like the Telephone Company build upon research and deliberate action, and I think the most significant part of our American business world has the scientific attitude and is increasingly developing it all the time. The new generation is constantly coming in. The hope of the day, I believe, is that the younger men get this point of view, get it solid, and will see its virtues.

XX

PRACTICAL APPLICATIONS OF SCIENTIFIC PRINCIPLES TO BUSINESS MANAGEMENT: PSYCHOLOGIST AND INDUSTRIAL ENGINEER (Continued)

By Henry S. Dennison

I will ask your indulgence again this evening for a somewhat disjointed talk. Because Miss Follett's papers are full of inciting ideas, sometimes in subordinate clauses, I cannot quite escape the temptation to say something concerning them and, therefore, sacrifice order for my own personal satisfactions. On her two last lectures I want to start with what will serve to my way of thinking as a rather complete statement of the problem of the organization engineer, the social engineer, the human engineer, whichever you are of a mind to call him. She says:

> It seems to me that the first test of business administration, of industrial organization, should be whether you have a business with all its parts so co-ordinated, so moving together in their closely knit and adjusting activities, so linking, interlocking, interrelating, that they make a working *unit*, that is, not a congeries of separate pieces but what I have called a functional whole or integrative unity.

Here is a definite statement that a going organization should be made up of its separate parts working together; that a group of men all supported by the same institution is not necessarily a going organization, any more than a heap of metal parts and a can of gasoline held up by the same platform is a going automobile. What seems to Miss Follett "the crux of business administration [is] the relation of departments, of functions, however you wish to put it. Any study of business as an integrative unity should, I think, make this problem its chief concern." I have chosen that out for emphasis, because the tradition of American business management has been to neglect the relation of departments. The old statement that we have repeatedly

heard is that "I appoint a man the head of a department and hold him accountable for results." More often, the result has been to set up that internal conflict which has been too common in the larger concerns.

I have had made a rather extreme chart, which belongs to nobody in particular but is a typical old line chart, split and resplit into departments and divisions. Now the actual carrying on of a business takes place down at the bottom. What we have learned to our cost a number of times it that the carrying out of anything usually involves someone here and someone there and someone over there working together, such as the sub-foremen in one division and sub-foremen in another division. That old line chart allowed us the privilege of walking up the line step by step until you came to the common ancestor; then step by step down the line until you came to the fellow you wanted to coöperate with and, of course, did not. It was like a whispering party. When your story got four steps away, it was not the same story as when it started. And sometimes the people in the next office were so far removed from each other as regards working together, that they might just as well have been in the next State. Now the problem we are working out, and I believe in our own concern we have made some headway with it, is to effect cross relations. This we have tried to do through a structure of committees pretty closely interlocked. We use our committees to create these cross understandings not only for specific problems, but continuously, so that many of our problems will be seen in their various aspects as soon as they arise. We have used partially the scheme of having the chairmen of the lowest line of committees form the membership of the next line of committees, and the chairmen of those committees created into a still higher group of committees. Practically every member of our Board of Directors is a chairman of some committee. Almost every member of their committees is chairman of some other committee, having to do with matters of greater detail. Thus we create a current understanding which comes as near furnishing a cross-relationship in an organization as we, at the present moment, know how to do.

Miss Follett says:

> It should be recognized that almost everyone has some managing ability, even if it be very little, and opportunity should be given each man to exercise what he has on his actual job. If all on the managerial force have . . . . initiative, creative imagination, organizing and executive ability, there are many workmen who are not entirely lacking in these qualities. We want to make use of what they have. If the job of every workman were analyzed so that each could understand what opportunities he had for managing, that might have both a direct and an indirect influence on production. Indirect because this might greatly increase the workman's self-respect and pride in his work, which is so necessary for the best results. . . . . We have always known that no sharp line could be drawn between planning and executing—one set of men does not do all the planning and another set all the executing, the higher executives are those who have the ability to contribute to the planning and are paid more for that reason—as we have always known this, so now we see that no absolutely sharp line can be drawn between management and labor, that the division between those who manage and those who are managed has been in part artificial.

That crashes our old line organization pretty thoroughly to pieces, if it is followed through to its logical conclusion. That it has a very great deal in it I must agree, because my own attempt at analyzing the managing function in the Taylor Society Bulletin some months ago is partly responsible for Miss Follett's insistence in stating that management is not the exclusive function of the few; but that it is partly, even if to a very small degree, exercised all down the line. We have in hand in our Company now a job which later on may throw some more light on the problem of just what managing is. We have a division, as I stated the last time, between our managerial and our non-managerial forces. In order that this division shall be as soundly based as possible, we are going to have some exact job analysis made of what constitutes managing in specific cases so as to determine those who ought to be in the management group and those who ought not. Before we begin we know, and we are having that analysis made because we know, that not a living soul does one hundred per cent of managing, or zero per cent. It is certain that most of our executive officials spend a considerable part of their time in work that could not by any stretch of the imagination be called managing. When an executive jots down a memorandum on paper he is not managing; when he dictates a letter on a subject on which his mind is

already made up, he is carrying into effect, executing, carrying out the management decision that he has made. On the other hand, an elevator man who has a ring from two floors must make some choice. As he thinks it over for a fraction of a second, or a few seconds, as to which floor he shall go first, he is planning in exactly the strict sense we use when we speak of managing in high offices. Of course, he only does that one or two per cent of the time, where the high official does it to a much larger extent.

Miss Follett gives a specific illustration which is worth quoting:

> A workman who had sat on a good many conference committees said to me with dignity and pride: "When I am on that committee I am the equal of anyone; of course when I go back to my work I am just a workman, but while I am on that committee I am the equal of the President himself." I told that to the President and he said: "He must be made to feel that all the time." Yes, but the difficulty is how.

Now, that is another statement of this basic part of our problem of industrial relations. As I have said of the suggestion system, its greatest value is in its effect on the minds of working people in making them accustomed to the suggesting of new things. They go about their regular work in a slightly more managerial spirit. One reason that we were willing to go thoroughly into the experiment with the Works Committee was because we believed it was an expression of the managing desire, tendency, urge, whatever you have a mind to call it. And we believe now that it does give a certain but as yet inadequate expression to that tendency, so that people feel they have some part, even if small, in the managing function, and are braced, encouraged and inspired to take a constantly greater part. Those men who have actually been utilized as fractional managers are affected with regard to the whole of their work, and affected favorably. Miss Follett quotes the B. & O.:

> It is claimed that the plan of the B. & O. of bi-weekly conferences between managers and employees in the workshops has produced the following results: reduction in labor turn-over; routes of carrying material shortened and made easier, fuller and more regular operation made possible; the average delays per week behind schedule reduced; monthly materials per employee reduced; and the work of repairs greatly facilitated as well as the quality improved—the problem of getting a steady flow of adequate material was solved and certain difficulties

in the tool-room which wasted time were straightened out. This is all part of the service of managing. But even when the workmen's managerial capacity is not tested so far as this, there is usually room for some. Whenever labor uses its judgment in planning, that . . . . is managing. If the worker is given a task and allowed to decide *how* he will do it, that . . . . is managing. It would not be possible to carry on a business if the workers did not do some managing. . . . . The fact that workers themselves have in many instances treated the disputed points between employers and employees as problems rather than matters of right is a hopeful sign that the workers' demand for share in control is not a mere gesture for "power," that they feel in themselves managing capacity.

Whenever the trade unions show managing capacity, I think they do more for their cause than by any other of their activities. When the Amalgamated worked out a plan of employee insurance, when a few years ago the Photo-Engravers Union of New York drew up a new price-list, submitted it to their employers and won its acceptance, they went far beyond the function of unions as defence organizations.

But I say, as developed to date, the Works Committees offer greater chances to contribute to effective managing. They are resident and directly concerned. Broadly organized trade unions, nationally organized as they usually are, are of necessity absentee and remotely concerned. Unless our American unions find some method of decentralizing—and I am led to believe the English unions have found one—we cannot expect out of our trade union structure much constructive work. They must remain defense organizations.

Here it will be appropriate to take Dr. Person's point on Shop Committees. For Dr. Person's papers as a whole, I have, of course, nothing but complete support. The attitude towards the managing function which he stands for, we are trying to put into effect and have been doing so for years and shall for more years. He phrases in his four lectures more clearly than I could myself just what that attitude involves and what it is. So I shall take up from Dr. Person merely his statement on Works Committees and read far enough to let him answer himself. He says:

It has undoubtedly been a surprise for you that I have said nothing about shop committees and other alleged devices for securing workers' participation and consent in management. You will be more surprised when I give as the reason, exaggerated in the way I put it for the purpose of emphasis, that I consider such things as shop committees relatively unimportant in securing good management and coöperative good will, compared with the aspects of management which I have discussed. Devices such as shop committees are to the management problem

what makeshift shoring is to the building which leans and sags. It sustains the building for a time, but the fundamental restoration is to be effected by constructing new foundations, and inserting new sills and Lally posts. The functional integrity of the building must be restored. Likewise in an enterprise which is experiencing serious managerial difficulties—failure to earn profits and labor troubles—the foundation of the management must be reconstructed and functional integrity restored. The elements of good management which I have discussed are as fundamental to the operations of an enterprise as are the foundation walls, sills and bearing partitions to a building.

Even labor troubles are troubles of technical management. . . . . Good industrial relations result from a management that knows what it is doing; a management that makes plans, gets orders, regularizes employment, operates precisely and economically—in other words, does the things which maintain it as a going concern; that brings all the resources of the scientific method to bear on its problems; that establishes contractual relations on the basis of all the facts that are ascertainable; that takes operatives into its confidence and secures approval with respect to details of standard method, time and rate; that enhances individuality in teamwork instead of minimizing it in mob effort; and that—not least—increases social income.

Where there is not management of this kind, shop committees and similar devices are generally makeshifts, evasions, shams. *But where there is management of this kind, the shop committee serves as the final effective mechanism of the whole system of management.* The basic management methods make the shop committee genuine and constructive, and *the shop committee enhances the effectiveness of the basic methods.*[1]

Now, that is precisely the answer to my mind: where there is no management of this kind, shop committees are not to be depended upon, and I think the presumption of his first paragraph was that he was talking about concerns poor in management, although he did not specifically so state. But where there is management of the right kind, "the shop committee serves as the final effective mechanism of the whole system of management. The basic management methods make the shop committee genuine and constructive, and the shop committee enhances the effectiveness of the basic methods."

With my emphasis principally on the last sentence I agree completely with what Dr. Person has said. Those who in 1919, in very short-sighted and amateurish fashion, depended upon the shop committee to reconstruct their business, depended not upon a broken reed, but upon no reed at all. It did not even remotely resemble the

[1] Italics mine.

proper mechanism to correct the situation they were looking to correct. And where shop committees are in concerns that are shaky in the effectiveness of their management, the shop committee itself adds to the shakiness. A shop committee is an added complexity of management, but also an added opportunity for profit. It does not make management easier; it makes management harder, but gives it an opportunity for greater effectiveness, greater profit.

Miss Follett says:

> We shall all agree on one point however: there should be no haziness in regard to employee functioning in a managerial capacity; the limits of such functioning should be frankly and sharply defined. For instance, the Works Council is sometimes a judicial body; sometimes a legislative body; sometimes an advisory body; it is never an executive body. This should be openly recognized. To be honest and clear-cut in delimiting function is, I believe, essential to success of the redistribution of function.

That is a warning that concerns do not need so much now perhaps as a few years ago, but they always need it a little. Do not allow a shop committee to start on any hazy understanding, certainly[1] on no misunderstanding of its position. It is correctly, we believe, an advisory body only. We are watching the experiments that have given it almost the executive function.

Miss Follett quotes from Mr. Stoddard's book on *The Shop Committee:* "Collective bargaining is the fundamental theory on which the shop committee rests;" and comments:

> I do not think we are going greatly to strengthen business and industrial organization by this conception. It seems to me that the aim of employee representation should be not merely to transfer the antagonism of "sides" to a different field, but to see how far sides, that is controversial sides, can be done away with. Collective bargaining seems only a temporary expedient, for it has no real vitality as it does not create. It fixes the limits of wages, hours and conditions; it might be conceived perhaps as fixing certain limits to policies, but it does not create. . . . . Collective bargaining will go on, I hope, until we have found something better, but I believe that something better will be found, is being found.

In another place she asks:

> But is bargaining the only determinant of value, whether of goods, labor, or what not? What of scientific management? Does not every business man find one of his most pressing problems to be: how to integrate bargaining and scientific

methods? As far as I have seen, scientific methods do not, cannot perhaps, set exact values; at present they merely set the limits of the bargaining process. Within those limits bargaining still goes on.

Both these quotations bring me back to a point made in my first lecture, that I believe bargaining, real bargaining, to be not something to be set over against scientific process, but a part of the scientific process of management. Because correct bargaining is the discovery of relative values and only by bargaining, by trying and testing tentative values, can we disclose the true relative values which are at the base of exchange and production, under whatever system they are carried on. I agree with Miss Follett, that collective bargaining is not the only basis of shop committees, although better bargaining can frequently be carried on, and values more correctly disclosed there than by attempts at the head office without contact with employees to decide what wage revisions shall be made. But the Works Committee has functions well beyond bargaining—the function of assisting in management, the function of protecting employees through appeal and a number of others.

Miss Follett gives a hint of an advanced stage of bargaining, in works committees:

I think it a good plan, ... whenever possible, not only that a study of the situation should be made irrespective of sides but that it should be coöperatively undertaken, as in the case of a Board I was on where we could not agree on the facts even, as long as each side was getting them separately and pitting one set of facts against the other. When a sub-committee of both employers and employees was appointed to gather these facts coöperatively, that was a big step toward final agreement.

That was, to my thinking, simply a more thorough way of bargaining. But it had other advantages, for the opportunity to get together at the very beginning of things before differences have become crystalized and emotionalized is one of the effective means of making differences constructive rather than obstructive. She here points to the practice which is being carried on to a greater and greater extent, of jointly investigating facts through small joint sub-committees. When we set tasks and rates, we do the mechanical work of time study, first, and get what facts can be disclosed with relative mechanical accuracy. Then if there is any doubt about it, we bring in a small

committee of employees at the very early stages for consultation, so that they may have their opportunity in the very discovery of the facts that lie at the basis of further understandings.

I am tempted to mention Miss Follett's statement:

> Every demand for power should be analyzed to see if the subject is "independent" power or joint power. That should be one of the tests of any plan of employee representation—is it developing joint power?

That is a very valuable statement. If a plan of employee representation is simply setting the sides up in a little different way; if it has no effect of creating joint power; if it increases difference by increasing the power of the employee, and that is all, it is falling short of its objects and affords no opportunity for the integration that Miss Follett has mentioned so often. Its test is the degree to which it develops joint power.

She throws an extremely interesting sidelight on the question of representation, one which interests us within industry and outside; which is, whether an employee representative should rigidly represent his constituency? It has bothered us a good deal. It bothers the politicians in Washington. Can they take any stand that the people who voted for them would not take? Now, of course, we cannot get any constructive representative government, any development of new plans for the future, unless there is freedom for the representative to step beyond what, at the moment, his constituents might approve. Miss Follett puts it in words which are decidedly valuable: "In any conference between managers and workers the representatives of the workers should represent the workers' point of view, but, the workers' point of view of what is best for the plant as a whole." She carries the same thing on to the department heads, who should see the good of the whole from their department point of view. If they will bring in to us a point of view of the good of the whole from these varied angles, the job of general management will be made easy.

Regarding power, which you remember was the principal theme of lecture XII, she says:

> Is it that the most fundamental thing in man his "urge" to self-expression and self-determination, combined with his ever seeking the larger, the most complete? Are these twin impulses at the heart of his being perhaps the chief reason for the worker's demand for power.

> Formerly, in the time of individual production, this "instinct" [for workmanship] was expressed in the individual's own work. Now that individual production has given way to group production, this "instinct" cannot be expressed unless the individual workman has something to say about group organization and the technique of group production.

Take the two statements together. I doubt very seriously whether there is an actual demand for power from more than a small proportion of the people and a still smaller proportion of the typical laborers. Their demand may take that form, but it is for power to get something else. It is not power as such that most of them want; the majority of the human race does not hanker after power as such. But here is a rich hint that the worker should have something to say about the technique of group production because he has lost that something to say about the work of his own hands, which he had, in spite of all the supervision in the world, in the days of the handicrafts. His reachings for power may be his gropings to bring back conditions that will allow him some expression for the, perhaps subordinate, but probably real instinct of workmanship.

This is a little offside, yet I cannot help quoting it:

> Capital and labor must fight or unite. No gentlemanly name for fighting will change the essential nature of the relation between capital and labor in those plants where "sides" are sharply defined.

The warning would well be put in large letters, because we do try sometimes by gentlemanly names to deceive ourselves into believing that that deep seated difference is not there. We have to get down deeper than a name and go thoroughly into the facts, and employers have now a real chance if they will take advantage of it. You perhaps noticed at a recent meeting of the Workers Educational League, Scott Nearing insisted that they did not want peace between capital and labor; that there was no place for the unions unless there was war, and that war was what they wanted; and the officials took just the opposite side, and insisted, as Mr. Greene has insisted several times, that they must take a constructive part. If the development can take that form we are indeed fortunate. As I have said, it may require some minor alterations in trade union structure, so they can get the degree of decentralization which seems to be necessary for joint work-

ing together. We find in our own plant a small committee of workers and foremen or sub-foremen will get ahead best; the nearer you can get to the specific case, the better chance you have for constructive, coöperative work.

You remember the theme of Miss Follett's last lecture: "Genuine power is always that which inheres in the situation. Our first search should always be to discover the law of the situation."

The key throughout her discussion is that she repudiates physical power; the ability to injure, to compel, to jail, she repudiates as true power in any social situation. It is an influence, of course, but it is not what she means throughout her entire discussion by power. Yet that physical power is today the basis of much of what we call "authority," "rights," or in common language "power" in our industrial and commercial structure. It is the power of the state to compel obedience, to enforce contracts, to refuse the employee admittance to the mill from which he has been discharged; physical power or the threat of physical power is there all the way through. I believe that such physical power is today appropriate and necessary in the foundation of the social structure and keeps us from falling back; but that it is wholly inappropriate in the running parts which keep us alive and going ahead. I go further and question whether the use of physical power, or of any influence which is based principally upon it, is not practically always a loss in the constructive work of social groups. I am inclined to think it is; that the fear based upon physical power is not the help it is commonly supposed to be; that the "healthy" fear of discharge is about ninety per cent of the time a very unhealthy and costly sentiment in the employee's mind.

Miss Follett goes on to a discussion of her idea of power as it arises out of the law of the situation, and says:

> You cannot confer power because power is the blossoming of experience.
>
> In the literature on employee representation, we read much of the delegation of power. Myers tells us that the power of the Works Committee is "delegated," that the Board of Directors or the stockholders have the ultimate authority. The Nunn, Bush and Weldon Shoe Company say that they have "delegated" to their employees the power of fixing wages and hours of work and the right to discharge. I read again, "Authority must be distributed from its source, and filters down through delegation to all parts of business organization." Power must be distributed from its source? Very well, but what is the source? A workman in a

factory I was visiting said to me: "Who do you think is the boss here?" It seemed, he said, difficult to discover him. "Is it the Manager of the Works?" he asked, "Or is it the President?" But these are responsible to the Directors. Is it then the Directors? But they are responsible to the people. Is it then the people? I tried to find out what he meant by the people, but he was rather vague about that.

(We get to be a little vague at that stage quite often.) Miss Follett continues:

This interested me, however, because I had not thought I should find the old question of sovereignty, which I had struggled with in political and legal science, cropping up in modern industrial organization in such direct manner. The only legitimate boss, sovereignty, is, I believe, the interweaving experience of all those who are performing some functional part of the activity under consideration.

In other words, the only legitimate authority grows out of the law of the situation. A General Manager is just as much bound by the principles of good management as anybody else in the whole outfit. His "authority" is principally for use to carry over an emergency when there is not time to thresh out the case. Nothing in sound organization engineering and nothing in common sense can give him any real authority to insist that such and such shall be done, if it is counter to the principles of good management.

To quote Miss Follett again:

We have an unfortunate precedent in the use of such phrases as the delegation of power. Many writers on government say that the power of the state should be *divided* among various groups; many tell us that power should be *transferred* from one group to another; many that it should be *conferred* on the smaller nations. Hence it has been natural for many economists who write of something they call "industrial democracy" to tell us that the power now held by owners and managers should be *shared* by the workmen. These expressions, while containing indeed a partial truth, nevertheless at the same time *hide* an important truth, namely, that power is self-developing capacity. . . . . The manager can not share *his* power with division superintendent or foremen or workmen, but he can give them opportunities for developing *their* power. Functions may have to be redistributed; something the manager does now had better perhaps be left to a division superintendent, to a foreman, even to a workman; but that is a different matter; let us not confuse the two things. Indeed one of the aims of that very redistribution of function should be how it can serve to evolve more power—more power to turn the wheels. More power, not division of power, should always be our aim; more power for the best possible furtherance of that activity, whatever it may be, to

which we are giving our life. . . . . I do not think that power can be delegated because I believe that genuine power is capacity. To confer power on the workers may be an empty gesture.

Now, that is the key to some of our difficulties. If you place the power of legal authority where there is no ability to carry that power, trouble is certain to develop. To confer the legal right to control upon stockholders ignorant of the operations is to court inefficiency. To confer power or responsibility upon workers without their having the chance to develop ability to carry it, is almost certain prescription for trouble. Miss Follett continues:

The main problem of the workers is by no means how much control they can wrest from capital or management, often as we hear that stated; that would be a merely nominal authority and would slip quickly from their grasp. Their problem is how much power they can themselves grow. The matter of workers' control which is so often thought of as a matter of how much the managers will be willing to give up, is really as much a matter for the workers, how much they will be able to assume; where the managers come in is that they should give the workers a chance to grow capacity or power for themselves. . . . . If I were a manufacturer I should want to consolidate my workers, not in order to give them greater strength in a fight, but in order that they should, by conscious unity, be a stronger part of my plant and thus strengthen my whole organization. . . . . One thing should be borne in mind beyond anything else in the consideration of this subject, and that is that you should never give authority faster than you can develop methods for the worker taking responsibility for that authority. We may find also that we should not give workers authority without some corresponding stake in the business.

I call Miss Follett's attention here to another part of her own doctrine: you should not give power *much* faster than you can develop methods for the worker taking over that power effectively. Because, you remember, by her doctrine of circular response going a little ahead of their abilities, you help develop the abilities themselves. We have done that pretty constantly in the development of the Works Committee and in the development of our own foremen. We plan to give them a little more than they are at the moment quite capable of doing, and by that means are always helping to develop their capacities.

Miss Follett says:

When you have made your employees feel that they are in some sense partners in the business, they do not improve the quality of their work, save waste in time

and material, because of the Golden Rule, but because their interests are the same as yours. . . . . This is the Golden Rule taken behavioristically. It is, by the way, the Golden Rule taken idealistically, too, for a functional whole is a much higher conception than our old notion of the Golden Rule.

Whiting Williams has made one very valuable commentary on the Golden Rule. His comment is that it is no doubt the best rule to follow, but who in thunder knows enough to apply it? Who actually knows what it is the other would we should do unto him? Miss Follett further says that what a particular Mr. B would we should do for him, might not be good for society at all. We should do what is good for the whole; that is the good which we should do unto him; that is the broader and deeper and finer meaning of the Golden Rule.

The world has long been fumbling for democracy, but has not yet grasped its essential and basic idea. Business and industrial organization is, I believe, on the verge of making large contributions to something far more important than democracy, democracy in its more superficial meaning—to the development of integrative unity.

Now, that is a much more comprehensive conception of democracy, than the mere development of sensitiveness in a few aristocrats, which you remember Dr. Carver set forth. Dewey, in his *Reconstruction of Philosophy* has two sentences that are worth reading in this connection: "Full education comes only when there is a responsible share on the part of each person, in proportion to capacity, in shaping the aims and policies of the social groups to which he belongs. This fact fixes the significance of democracy."

One word which Miss Follett uses widely through her papers and, so far as I can see, without the type of analysis which she so effectively uses with other common words, is "responsibility." Now, what is meant by responsibility, by "accepting responsibility," by "power with or without responsibility;" by "collective responsibility?" I have attempted to see if I could make my own mind clear, because the word, I confess, throughout her papers always leaves me a bit in doubt. I never quite get the concise notion from it that I get from so much else in her work. So I have tried to write down the elements of my own thought as aroused by the word "responsibility." It seems to me

that when the accomplishments of any individual in an organization are measured and compared to a set of requirements, the individual is being held responsible. The measurement may be hazy, the requirements may be very hazy and only partly stated—they are in practice many times hardly made clear to anybody's mind, the boss's or the worker's. But to the extent that one's work is measured and compared with some sort of requirement, it seems to me that he is being held responsible. The simple saying that a man is held responsible does not make him so; saying, for instance, that "I put a man in charge of a department, and hold him responsible for results," if I do not know what results ought to be, or have no way of knowing really how he is running the department, does not mean anything. My saying I am holding him responsible, does not make it so. The man is not held responsible unless what he does is known and compared to some sort of requirement.

Usually the measuring is done by some employer and the comparing is against some employer's requirement. But the word "responsibility" has as much significance if a man's wife, or his pastor, or his father and brothers should set the requirement and do the comparing. He can be held responsible to a family tradition—responsible for maintaining the standards of behavior in a certain family. He can in many ways he held responsible by his wife. And the word has added significance when the man holds himself responsible; when he has his own ideas of what should be required of him, and makes some sort of size-up of how well he has met these requirements. He is then holding himself responsible. But anyone, the man himself or another, may call the pastor's or the employer's requirements unreasonable; by which one can only mean that in his judgment such requirements are not in accord with the demands of the situation. So the requirement of the total situation is the basic demand upon which rests the permanent, true, inherent, responsibility of the individual to any organization. At bottom, in a permanent sense, to have persons responsible is to have them held by themselves, or somebody else, up to a requirement based upon the law of the situation. Resting upon this in industry is what we call the equity, justice or fairness of the employer's requirement, which is of course, more obvious, more apparent, more present than "law of the situation,"

but more changeable, evanescent, accidental, unless it is actually consistent with the demands of the total situation.

Ordinarily we find an employer's full requirement to be made up of two parts: The specific set task and a more vague "expectation." We are likely to say with reference to the task that we hold a man "accountable" or "answerable," and with reference to the expectation that we hold him "responsible;" but certainly no one could be said to be held truly responsible who was allowed to neglect his specific task. So I take it the word responsible covers the precise task also. We want so many thousand tags printed per day. We want you to go to this town and call on all the stationers. These are parts of the man's responsibility, the performance of which we commonly take for granted.

Then there is the other part, less definitely specified, which I can only call expectation, but which also comes into the total requirement. Applied to manual labor, the task element is of most or usually of sole importance; of executives we expect more than the routine specified task. And here, I think, lies the answer to one of Miss Follett's demands, that if workers are to have any part in managing, they must have responsibility. "If they are to be said to have any part in managing, they must have responsibility." Employers can meet her demand, at least in part, it seems to me, first by being more exact and clear in the task requirements, and second, by publicly expecting more than task work, and by making appropriate response, if they do or do not get it. In a word, by refusing and raising the requirement against which we measure the performance of the workingman. She would like, too, I imagine, to see some real development of an inner responsibility among laborers, such as an appeal to their hearts by the law of the situation, so that they would be inspired to hold themselves up to standards of performance in accordance with it; our set-up of industry should be such as somehow to inspire such a feeling of responsibility among workers.

By a man's responsibilities we often mean those things he "ought to do." Among such things are always his simple opportunities, simple acts which he can do and which are worth while. Such valuable things as he *can* do, we say that he "ought" to do. Here is a natural close partnership of power and responsibility. Yet neither private nor

public opinion has begun to adjust its old normal requirement (which was once expressed as *noblesse oblige*) to the modern forms of power. As it does so adjust itself, it will enforce the responsibilities of power by expecting its use for more than selfish advantage.

I have said that task is the most important with the laborer, expectation with the executive. It was not always so. It was just the opposite in the old days, when you used to be very precise about what you expected of the executive and held him accountable for certain tonnages in his department, but made absolutely no specific requirements as to the performance of the laborer. Scientific management has made a considerable contribution in reversing that situation and making specific the requirements of the laborer; showing by scientific analysis that too often figures of the performance of a department do not tell the whole story. How much bigger contribution yet can be made by social engineering in holding each separate member of a business, whether laborer or member of the executive force, responsible for the full sum of his capacities!

DISCUSSION

Question: Don't you have to translate the feeling of responsibility to what you call the law of the situation into something more concrete and less abstract? And if so, what? It seems to me, if you appeal to any individual member you assume that you are dealing with highly trained minds which, of course, is rarely the case. I was wondering how you would translate or disguise it so as to get some agreement?

Mr. Dennison: You do not transform nor disguise it, you apply it to a case in hand. A person would seldom deny that what was the best for all hands in the long run—the "law of the situation" should rule. That is the one thing they understand very readily. We have our best luck in working out problems in that way. We have had our lighter troubles in settling questions with the Electrotypers Union, for example, where we both can examine the question; get the whole thing before us with the idea of seeing what is, in common language, good for both of us, and then work towards that. If all they do is to say we want this and we will scrap if we do not get it—well, that's that, and there is no conference to it. Of course, once in a while that is the case; but that is not a conference, that is a scrap. When we get together, the thing we will be talking about is what is to the best advantage of the whole of us taken by and large and in the long run, which is the way we would phrase what Miss Follett calls the law of the situation. We have not had any practical difficulties dealing with it when faced with a concrete question.

Question: Do you find when you have a conference in which the solution reached is a real integration, that all the parties to that case recognize a sort of social process has happened thereby arriving at what you are calling the law of the situation? Otherwise, it seems to me, that you do not do away with a continued invoking of authority, because we are all disposed to invoke the good of the whole for the thing that looks good to us. It seems to me that unless there is actual schooling of your managers in the process by which the conclusion arrived is made an integration and not a compromise or a one-sided decision, you have not any development of the minds of the people concerned.

Mr. Dennison: I agree that when we get truly together and are aware of the process we have an added instrument of education, but I do not agree that there is no education in integrative discussions where there is no awareness. The education then is in the habit formation. The change of attitude, though very slight, is a contribution towards a greater change of attitude. Of course, there is often an elation that the right way out has been found. There would be no such elation, I suppose, if one side or the other had been conquered, or there would have been few elated. If there had been a compromise, there would be nothing but relief that we had got out of the mess, and that is all.

Question: Is not this generally true? There is a definite social growth, an educational and inspiring process in these conferences when well handled, which might be expressed in this way. I am defining the elements of elation that you referred to a moment ago. There is, first, the demonstration that the management is patient and willing to sit for an indefinite time to *determine the facts*. There is, second, an inspirational value in the fact that the management is dedicated to a high ideal, that it is not selfish and not personal. The management states what are the facts—what is the total situation. While it may not be expressed during the conference in sociological terms, is there not a very definite and positive value in those conferences regardless of the case? There is a demonstration that the management is glorifying the privileges of democracy by their autocratic use. They are using their powers to increase the power of those in back of them. But by this method they are continually glorifying the situation to which they themselves are at that moment bowing. Now, I think that is general and inevitable, and it always takes place when a conference is handled on the basis of respect for the law of the situation. You can put the law of the situation in such terms as these: It is not what *you* want to do, or what *I* want to do, but the *job* is the boss.

Mr. Dennison: Yes, "what is the best thing to do." We have no difficulty in getting people to understand that but find them greatly interested as a matter of fact.

Question: Do you see any direct influence on the trade unions by the shop committee movement?

Mr. Dennison: I would not dare say that there had been any direct influence; there probably has not. More likely, the apparent change in the attitude of the trade unions and the development of shop committees have grown out of the same group of influences. Possibly the wastefulness of mere conflict finally has become apparent enough to make everybody move. The trade union leaders, who believe that workmen will finally get the most benefit through trade unions, seem to be taking the stand that somehow constructive work and not fighting ought to be the keynote of their efforts. I doubt if there is a direct influence of Works Committees upon them which created that feeling. In our own case the unions elect their members on the shop committee, who deal with us through either the union or the shop committee as they prefer. That gives the union what chance they want. They do not complain at all and we do not complain.

Question: If the employee representation system were to be thoroughly worked out with the unions, what function would remain for the national trade unions?

Mr. Dennison: I said in Washington, at the First Industrial Conference, that I believed the function of defense would be their main function, which would be necessary so long as there was a significant number of employers ready to take advantage of them. That would be quite a little while yet. I believed then that that was so, and I believe so now.

Question: I was going to ask if in a first class shop committee and genuine profit sharing would not be a situation into which no union could intrude?

Mr. Dennison: When an employer realizes that he is leader of a working group and that one of his principal purposes must be to keep the peace for all time, and more than the peace a real inspiration to work along together—he is ready to have a true profit sharing plan and the works committee will be an essential part of it. It may be a little idealistic, but I would like to believe that such a situation can go on forever without making union actively necessary. Even then, however, we would have our difficulties with basic wage rates, for we now are greatly influenced in fixing our wage rate by nationally settled rates. I do not know just how you would get foundation rates to start from without some national bargaining power.

Question: You do not have anything of that sort in the case of common labor, do you?

Mr. Dennison: Almost every wage rate we have can be analyzed as a differential from some nationally set rate. You say the compositors are getting so and so; then you step down to the apprentice grade and down to the common labor grade for appropriate rates.

Question: Has not the restriction of immigration a very potent influence towards keeping wages up? Would it not to that extent make the national organizations somewhat less necessary?

Mr. Dennison: Somewhat less, but only a little bit. Restriction of immigration would set wage rates higher, but only, to my way of thinking, very moderately affect any of the national trades unions. It works the other way also, towards strengthening the national organizations by closing up the field, by not admitting so much "free labor." I think it would not have much effect.

XXI

THE PHILOSOPHIC FOUNDATIONS: IS A NEW BUSINESS PHILOSOPHY FORMING?

By H. A. Overstreet

What is our actual, present-day philosophy of business? Is it changing into one more adequate? Have the foregoing lectures thrown any light upon these two questions?

Emphatically, yes. In the first place a certain quite essential attitude toward the whole business process has been described. I mean the attitude which regards the business system not as something to be judged "as is," a kind of static entity to be pronounced good or bad, but as a developing process to be evaluated in terms of its changing conditions and outlooks. You will remember Dr. Person's fine handling of this part of the subject. He described for us the pioneering period in American business, what he called the period of discovery and preëmption. Now it is quite clear that at that time there were basic assumptions about business enterprise which were wholly compatible with the conditions involved, assumptions which still last over into our present, quite different period, and which consequently often trouble us in no small degree.

What was the business philosophy of those pioneering days? There was available, as we remember, a great deal of unexplored territory; consequently there were unlimited opportunities for enterprising spirits to go out, to discover, and preëmpt. Thus the emphasis was inevitably placed upon initiative, self-reliance, free enterprise. Again, there was no great need to husband resources. Hence an unconcern about waste.

We have passed out of that period. With the meeting of the last frontier we have had to turn back upon ourselves and develop methods and attitudes more compatible with the absence of unlimited opportunity. We discovered that we had to pay more attention to

organization. We had to develop an investment system which meant (1) the enlargement of our enterprises; (2) the establishment of a new relationship between those whose only relation to the enterprise was wholly financial and those whose relation was either partly or wholly operative. Again, unconcern about the wastage of resources was no longer possible. Hence there grew up an interest in management, and finally in scientific management.

Now all of these changes have subtly modified our basic assumptions about business enterprise, so that a new philosophy of business has actually been in process of shaping.

Let us come, then, to what seems to be the situation in our present day. As a result of our new necessities—for organization, management, conservation of waste, etc.—a number of business and industrial devices have been invented. I quite deliberately use the word "invented." I was delighted to find Mr. Dennison constantly using the term "social invention." He adopted throughout the basic assumption that our attitude should be one of regarding business as open to our inventive genius, to our "tinkering," if you will, instead of regarding economic enterprise as a self-righting system calling for no particular reconstructive thought or effort on our part.

What have been these new devices in business and industry which seem to imply on our part a new set of basic assumptions? In the first place, scientific management. However much there may remain a dislike for scientific management in the industrial backwaters, the trend, on the whole, is toward intelligent, examined and planned organization. That, however, carries with it a profoundly important new basic assumption, namely, that waste of any kind—mechanical or human—is not to be tolerated. Why? Because it does not pay. The motive is still predominantly self-interested. But this is to be noted: as scientific intelligence is applied to the organization of resources, there begins to grow a pleasure in the application of scientific intelligence for its own sake. Thus, increasingly, the delight in the effective saving of machinery, goods and human life becomes a motive in its own right.

The beginnings of this are to be seen in one of the "inventions" growing out of scientific management, namely, personnel management. A good deal of so-called personnel management, of course, does not

deserve the name; but in an increasing number of cases it represents a new intelligence with respect to two types of conflicts in industry—the conflict between the worker and his more or less mechanized work; and the conflict between the worker and his employers. Personnel management is an effort to face these conflicts creatively (in the spirit so finely described by Miss Follett) rather than to permit us to work them out by means of the older "fight" techniques. Here, again, a new basic assumption is taking shape, the assumption that the real welfare of the workers is interwoven with the real welfare of business and industrial enterprise. Once this assumption is really held by our civilization, most of the industrial distresses from which workers suffer will be swept away. Something of the actual realization of this is seen in the increasing regard that is being paid to the recreational and the mental life of workers.

Another significant device that has been invented is that of industrial insurance. Here, again, is something of profound philosophic importance. It expresses the assumption that the individual's life is so interknit with conditions quite beyond his control that he can no longer be fully responsible for his individual good or ill. Besides, the ill of the worker is really an ill which visits itself, through his children and through the loss of his working power, upon society. Hence the new assumption—utterly scoffed at in the bouyant individualistic days of discovery and preëmption—that the individual, the business enterprise and society should be joint partners in the upkeep of effective and resourceful life. So we have a growing interest in health conservation, the sanitary conditions of labor, accident compensation, unemployment insurance, old age pensions. Again, I am perfectly frank to say that the motivation here is primarily self-interest. But again we discover the significant psychological fact—often to be noted in life—that employers who start to care for the health or well-being of their employees, because it pays to do so, become so much interested in this new enterprise that they eventually do it because they like to do it. Thus we note the gradual growth of a new type of motivation.

In the next place, one of the most significant developments of this new period of economic life is the increasing interest in labor participation. The idea is evidently growing that a business enterprise is

successful in the degree to which all the members are participating in an integrated way. This means that the master-slave philosophy; the "irresponsible boss" philosophy; the take-it-or-leave-it philosophy in business is really on the point of being profoundly modified. The new assumption—of course only in its slight and vague beginnings—is that the industrial relationship must be a kind of active or operative partnership, a partnership not (as in our abstract political thought) on the basis of "equality" or "similarity" of function, but on the ground of a functioning specialization.

Not only, however, are we beginning to develop an interest in labor participation in management, we are also developing an interest in labor sharing. Modern business involves a kind of profits not known in the pioneering days. There seems to be some reasonableness in the assumption that the worker—who has made a most important investment—should share in the investment profits.

Finally, I seem to discover in modern business a new attitude toward the consuming public. With the development from the pioneer days into this far more competitive period there has come a growing need for the new device of advertising. Advertising is pretty liberally damned by those who have no historical sense. But one who looks back over the course of economic history, sees in the history of advertising a growing need *to convince the public of the merits of what the industry has to offer.* Let us split that italicized clause in two. "To convince the public." Business has become a petitioner! It cannot damn the public. It cannot give the public what it itself wants. It must discover what the public needs and what the public will approve. Hence it increasingly emphasizes "the merits" of what it has to offer. In short, it faces the public in every one of its advertisements as selling something which is of serviceable value. I dislike using the word service. It has too many sentimental associations. Let us say rather that business is increasingly convinced that if it is to succeed it must be serviceable. And now again the significant psychological fact emerges: as business men find that if they wish to make profit they must be serviceable, they begin to take pride in building up a business noted for the integrity and the value of its goods. Thus the "service" motive begins to run the "profit" motive a close second.

So much for the changes which have taken place since our pioneer-

ing days of individualistic business enterprise. We may now sum up the whole matter by pointing to the attitudes which are beginning to take shape in the business world of today:

1. That business and industry are fields for the application of scientific intelligence.
2. That waste, both mechanical and human, is in every possible way to be eliminated.
3. That business is properly concerned with the well-being of all its participants.
4. That business must take its share of responsibility for mischances to the individual.
5. That business is properly, and throughout, a partnership.
6. That business is properly a form of public service.

These, I take it, are basic assumptions which are increasingly coming to prevail.

Put into still briefer form they may be expressed as follows:

1. Application of scientific intelligence.
2. Joint responsibility for well-being.
3. Partnership throughout.
4. Service to consumers.

Here we have, it seems to me, something of an indication of the new philosophy of business which is taking shape. It is a philosophy not imposed upon business from without—by idealists, humanitarians, arm-chair philosophers, or academic economists. It is one which *business itself is generating out of the necessities of its own changing conditions*. That is the only kind of philosophy which really counts. If there is much that is admirable in all this, we may have the hope that business will not be forever the "bad boy" of our civilizational enterprises. We may even hope that the strongly self-interested profit motive which, because of its predominance, still differentiates business from the professions and leads to so much that is ugly, will take a less commanding place in the business of the future. At any rate it is important that we see business as changing, with a philosophy that likewise is changing. Then we are prepared to "carry along" into a future more compatible with our finer human wishes.

DISCUSSION

Question: I wonder if there was not some analogy between what you have just done and the familiar process of rationalizing. Are you not taking these various tendencies that have grown up unconsciously and rationalizing them?

Dr. Overstreet: No, when I rationalize, I give an apparently acceptable reason for doing something which I am actually doing for quite an unacceptable reason; and I am fooling myself. But in the foregoing I have been saying with perfect frankness that self-interest has been involved from the beginning. I have admitted that. Nor have I minimized it. But I have indicated that out of this self-interest are growing a number of processes which will probably come to be desired for their own sake.

Question: How much credit do you give to the men who did not begin that way? Some of those men did begin with a philosophy. There are people who have inherited businesses, who have gone in and had some ethical ideas and tried to apply these in business.

Dr. Overstreet: I do not doubt that in every period we have persons who have been on the firing line of progress. So, in business, we have had those who have quite consciously sought to make business a finer thing. But when we are talking by and large as I have been tonight, I think we can say that the self-seeking motive has been dominant.

Question: Many people have had ideas and ideals which they brought to business to make it over. I do think we ought to give credit to the engineers and to some of these fine idealists in business.

Dr. Overstreet: I gratefully recognize their existence. The reason why I have not stressed them is because I was more anxious to find out what the system in its normal make-up had of promise. I think it is important to do this; for otherwise we tend to think of the system as an evil thing that has to be saved by a few devoted souls. It is far more exhilarating to me to find the entire system moving forward.

Question: Is there any relation between this new philosophy of business and the artistic conception? If a man were really an artist by nature, he would do a thing right and sacrifice the money he might make out of it. From your point of view would that be because he has a higher order of philosophy; or because he wants to do his work in an artistic way? Is there a growing tendency in all of us to develop an artistic attitude toward our work?

Dr. Overstreet: I feel that the factory superintendent who has an interest in efficient organization of his machinery, his routing and planning, really has the

artist in him. Any fine art is the effort to organize material in such a way that the result will be satisfying. In a factory where the routing is all wrong, there is the confusion which goes counter to the artistic sense.

Question: Your medium would be your personnel?

Dr. Overstreet: Yes, your personnel are the colors you are mixing; and you must not have them clash. You must have harmony in the situation. When we reach the artistic attitude in business, we get away from the paralyzing *laissez faire* theory that the whole thing will take care of itself.

Question: Do you not think the more practical demonstration of that in business is through the development of what we call the critical sense or the attitude of intolerance toward what is crude or incorrect or inefficient?

Dr. Overstreet: Do you mean that it expresses itself simply negatively?

Question: Quite frequently it is dissatisfaction with something that is wrong.

Dr. Overstreet: The critical attitude, of course, is fundamental to the artistic attitude; but I should say that without the creative or constructive you have no artist.

Question: It seems to me that we have come to a stage in productive industry on a large scale where a man cannot give expression to himself through tending an automatic machine, but will have to get it through the conception of how the part he is making enters into the larger creative enterprise.

Dr. Overstreet: I rather suspect that the man who has a profound artistic interest in his enterprise is the first to feel sympathy for the man who is just running a machine. He is probably the man who is going to give that worker a larger outlook.

Question: You mentioned unemployment insurance and also the responsibility of industry for mischances to its participants. I was wondering whether you paid any attention to or had any personal convictions about what is perhaps a phase of unemployment insurance—I mean the insurance of those who have become too old to work.

Dr. Overstreet: Mr. Dennison spoke of the pension system; and I take his statement as adequate. In business the pension is still in a voluntary stage. I suppose it is difficult to work it out in business because tenures are not as settled as in my profession. But the problem has been worked out to an extent in Europe; and I suppose that we, too, will find a way.

Question: Do you think that unemployment insurance or insurance against risks of any sort is a responsibility of organized business or the individual? Life insurance, for example, is recognized as a responsibility of the individual alone.

Dr. Overstreet: There are three parties involved really: the business, the worker, and the public. The public has responsibility because it is to the public's advantage not to have the man and his family thrown upon public resources. Business has responsibility, for it is very likely to blame for wearing out the energies of the man. Of course the individual has his responsibility. He ought to look alive; and should make his contribution. So I think that a threefold contribution is logical.

XXII

THE PHILOSOPHIC FOUNDATIONS: THE ECONOMIC MOTIVE AND THE FUTURE

By H. A. Overstreet

If the historical point of view developed in the last lecture has been grasped, we shall be the better able to discuss the problem which troubles us most about business enterprise. It is the problem of motivation. Business seems to be fundamentally different from the finer human occupations—art, science and the professions, inasmuch as the typical form of its interest is self-interest. In the arts, sciences, and in large measure in the professions, on the other hand, the typical form of interest is interest-in-the-work. Again, the typical techniques of busines differ, it would seem, from the typical techniques of the arts and sciences. In the latter, the fundamental technique is integrity with regard to the entire situation. The artist, scientist and professional man scorn "faking," "putting something over," "fooling the other fellow." Their work must be sincere. It must show honesty of intent and execution. There must be nothing hidden. The whole must be open to the most rigorous inspection.

In business, on the other hand—as in military warfare, its nearest analogue—the typical technique has been quite otherwise. "Getting the better of the other person" has not been unknown in the daily practice of trading: "bearing false witness" for the sake of making a sale has seldom, if ever, been regarded as a scandal; *caveat emptor* has, in fact, expressed the tacit admission that business is no place for innocents; that if a man cannot keep both eyes open and a padlock on his purse, he must expect to be a victim. Nor has business rejoiced in exposing itself and its processes to the light of full publicity.

In short, while the arts and sciences have been ego-centrifugal in the sense that they have stressed an interest in that which lies outside the individual, business has been ego-centripetal or egocentric in that

it has stressed an interest in things and processes in terms of their contributions to the individual's own success. Ego-centrifugal interests tend to develop techniques that directly advance the art (as in painting, medicine, science, teaching), while ego-centripetal or egocentric techniques, if they advance the art at all (business) advance it only incidentally and indirectly.

Here, then, is our deepest problem in regard to business. The basic economic philosophy has been one of acknowledged self-interest; the basic techniques have emphasized strategy, secrecy, the winning-of-victories-over-competitors, the deception-if-possible-of-the-buyer —all military or "fight" techniques. It is little wonder that war and commerce are so closely bound together, while science and the arts are the natural enemies of war!

Have we any hope that this basic philosophy of self-interest, with its inevitable "fight" techniques, will change? Are there any signs that it *is* changing? One difficulty in answering this question lies in the fact that many persons who are highly wrought up over the "iniquity" of business, take what is really an impossibilist attitude. They talk of the profit motive as they talk of the devil. Out with it, horns, hoof and appetite! They propose to bring a swift heaven on earth by substituting a pure and unadulterated opposite—the motive of service.

Now in this connection, Mr. Dennison, I think, did us a good turn in insisting that human motives are never simple. Any attempt to get completely rid of the profit motive is really futile. Our problem, in short, is not to get rid of it *but to make it secondary*. That is precisely what has happened in the arts and the sciences. The good teacher is highly interested in an increase of salary. In fact, any one who has had much to do with college teachers knows that "salary increase" is a pretty fertile topic of conversation. But in the case of the good teacher, the salary motive is secondary to the professional motive of fine, honest craftsmanship. I have yet to find a single artist, scientist or other professional man whose motive could be described as purely a "service motive." But I could find dozens with whom the "pride of profession" has so outweighed money considerations that they have foregone possible profit many times for the sake of doing their work with a fine integrity.

This should make the situation in business considerably clearer and also more hopeful. Are there any signs that the profit motive is being lessened in its sheer ruthlessness, its frank unconcern about human values?

We cannot answer this question by looking into the souls of business men. If they have souls, they are quite inaccessible to our psychological probings. Nor can we take much serious stock in what they say in their speeches—at their Rotarian luncheons or Chamber of Commerce banquets—sincere as it all may be; or of what they issue for publication, particularly in their inspirational house organs. Man has a brilliant genius for giving a fine show of respectable reason for what, deep down, is not done for that reason at all. Just how much the business man "kids himself along" in those fervent speeches of his, when his voice trembles as with a religious fervor on the word "service," just how much he is "kidding " his public along, it is difficult, in fact it is impossible to say. In this, as in most other matters of psychological observation, we are called upon to use what Dr. John Watson would call "behavioristic" methods. That is, it will do us no good to ask what business men *think;* rather we must try to find out what they *do* and make such inferences as we can from that.

Are business men doing anything which would seem to indicate that, while a mixture of motives remains, the profit motive is beginning to take a secondary place?

Before we attempt to answer this rather searching question, let us ask another. Suppose we put it to ourselves to answer which of two philosophies we should like to adopt: philosophy number one—everything to be done from the motive of getting the most for oneself irrespective of the good of others, sometimes even to the injury of others; or philosophy number two—everything to be done from a motive of warm interest in other people as well as a warm interest in doing something thoroughly worth doing.

I think we might safely venture an answer to that unbehavioristic question. Most of us would like to adopt the second philosophy. Why? Because—unless we are complete misanthropists—we like people fairly well; also we like to feel in some sense necessary to people; finally, most of us have a pride in a worthwhile job well done. If,

then, we do not adopt the second philosophy, it is probably because what we would like to do cannot profitably be done. After a bit of experience in the world, we shrug our shoulders. "Yes, if wishes were fishes! But this is a wicked, stubborn old world in which one soon learns that he has to clip the wings of his youthful idealisms!"

Here, in fact, is our difficult human problem. It is what makes the field of business so profoundly significant for the philosophic thinker. For those of us who are in this field are most distinctly at odds with ourselves. We should like so much not to be ruthless, not to be deceitful, not to be exploitative. We should like to feel as the scientist must feel when in every effort he makes he has the pride of one whose dominant aim is to put something worth while into the world. We should like all that, but—the conditions balk us. It seems as if in business one had to suppress his fine wishes and train only those attitudes and skills useful in the strenuous art of commercial getting-the-better-of-the-other.

I wish to emphasize this conflict within us. I do not think that the "human nature" which betakes itself into science is fundamentally any better than the "human nature" which betakes itself into business. It is simply that in the one sphere there is a pressure of conditions which inevitably shapes the responses in one way, while in the other sphere there are conditions which shape other responses. It is for this reason that I lay so great a stress upon business as a developing human enterprise. It may be that conditions in the past were such that the finer attitudes simply could not survive. If that is true, then the basic problem of business is to shape conditions so that the finer attitudes can survive. I have little confidence in the mere preaching of business idealism. I have far more confidence in the actual devising of such conditions as will make business idealism able to survive and operate.

Let me take a number of examples. Suppose we have in our retail business an indeterminate or unfixed price system. What will survive best in that system is the clever art of "putting it over" on the customer, of cajoling him into paying for the article as high a price as possible. Business technique, then, inevitably becomes a kind of mimic warfare, with all the necessary strategems, deceptions, obscurations, defeats and victories. There will be little chance for the inter-

est of the business man to center on "good service." We human beings are that upon which our attention is mainly focussed. If our attention *must* be focussed upon *getting* the best of the customer, we shall hardly have much mental energy left to think about *doing* the best *for* him.

Again, if we have no labor unions, we shall inevitably be tempted to browbeat our workers to the lowest possible wage scale. Why? Because everybody is doing it; and if we, out of humanitarian motives, refuse to do it, we simply go out of business. There is no chance whatever, in short, for our idealism to survive. When, on the other hand, there are strong organizations to protect the worker against browbeating, browbeating becomes futile; and we thereupon set about establishing a different kind of relation with the worker.

Again, if it is the custom to adulterate goods, the temptation—nay the necessity—is to do what everybody is doing. If we do not, others undercut our prices and we go out of business.

Again, if the bribery of public officials is a regular practice, if secret understandings with public service corporations is a matter of course, there is little chance for the single idealist to make a stand for righteousness and *also be successful as a business man.* He can, of course, take his choice of business success or lonely martyrdom—which has led to the cynical observation that one cannot serve both God and mammon. What we are interested in is in so civilizing the service of mammon that it actually becomes the service of God. Or to put it differently, what we are interested in is in so transforming the everyday practices of business that fine attitudes have a chance to survive and flourish. Can this be done?

We have already accomplished something. For note: *if* we have a one price system, our motive for deceptive bargaining no longer really avails us. We get out of the habit. We have a chance, in short, for better habits to grow. As a matter of fact that has actually happened within the life time of most of us. Attitudes are now at least possible which formerly were impossible.

Again, if the worker is able to protect himself, to bargain on an equality with the employer, the latter is able to "treat the worker white." This has actually happened—again, within the life time of most of us. Hence employer-worker attitudes of profound human value are now possible which formerly were impossible.

Again, if (for various reasons into which we need not now go—the development of more effective publicity methods, etc.) the general custom of adulterating has very much diminished, we have a chance to be proud of the purity and the wholesomeness of our products. This has actually happened—and again, within the memory of most of us.

Finally, if political bribery and secret understanding have been made unprofitable, opportunity is opened for the development of other, more pro-social means of making business successful. I need not recall to your memory the exciting years through which we all passed in the process of eliminating those anti-social practices—of bribery, secret rebates, etc. The result is that the man who hates political bribery and secret understandings can now survive.

To sum it up in a word: our motives cannot ever go far ahead of the general conditions of our life. Try to induce the women of the Fiji Islands to form child study groups. They ought to—of course they ought. That is, they ought to be motivated by a desire for intelligent child rearing. But what they ought to do in this respect can not be accomplished until many primary conditions of their life are very greatly changed. Hence it would be perfectly futile to exhort the Fijians to be interested in psychology. "First things" must come first. Or, to put it into Biblical terms: "Seek ye first the conditions which make righteousness possible, and a greater righteousness shall be added unto you."

So it is in our business world. We have our ideal of what we ought to do; what we should like to do. How much of that is really made possible by the conditions of business enterprise today? We come back to our first question a little modified. What do we actually do in business nowadays which makes possible the growth of what we call the finer motives?

In the first place business has in the last decades developed a technique which is of profound significance for the growth of pro-social attitudes. I refer to the credit system. The essence of the credit system is that transactions are made not by the transference of money but by the transference of the symbols of money. The credit system could hardly have been established in older centuries. It depended upon two conditions: (1) swift transmission of information;

(2) a well established banking system. But given these two, it still could not be successful without a third condition, namely, credit integrity. To be sure, the credit integrity which we have developed has not been the fine flower of a pure idealism. It has been a grim necessity; for anyone who proves himself untrustworthy in his credit operations is—not sent to jail—but, far more severely, is *locked out*. He can do no more business.

Here, then, has been a powerful agency making for rectitude in exchange. Before the credit system was established—and with it, its correlate, the bank clearing house—all manner of great and small extortions could take place in isolated regions with no one the wiser. Now with a credit system encircling the globe, credit integrity is the basic word in business. But the credit system connotes more than credit integrity. It connotes publicity. A firm which expects credit consideration must be known as to its transactions. To be sure the publicity is only partial; but it is so much greater than anything which formerly prevailed as to mark a veritable epoch in advance.

Thus a different attitude is now possible in business. The older buccaneering spirit hardly comports with unquestioned credit integrity and credit publicity.

A similar spirit of integrity shows itself in the transactions with the consuming public. It is now so usual as no longer to be remarked that money will be returned if the customer is not satisfied. Even in my short life I can remember the embarrassment in my boyhood days in trying to exchange what proved to have been a poor purchase. Nowadays the business man, no longer operating in the guise of a buccaneer, increasingly seeks for the more permanent suffrage of his constituency. Here, then, is the assumption of integrity and openness as to selling. If any secret flaw is discovered the company makes good.

Analogous to this is the spirit emphasized in most large business houses nowadays that a "salesman is known by the customers he keeps." A "go-getter," in short, must at the same time be a "go-keeper," or he is a detriment to the concern.

The conflict between "capital and labor" still remains. It will remain for a long time to come. But two things have happened to change the incidence of the problem. (1) The worker has compelled the employer to bargain wih him on equal, or approximately equal

terms; (2) the wiser employers, through the difficult lessons of labor turnover, sabotage, wastefulness, etc., have learned that, other things being equal, a higher paid man is cheaper than a lower paid man. For this reason industry has been increasingly turning its face away from the puerile and economically stupid technique of lowering wages in order to increase profits and has instead turned its attention toward the much more fruitful technique of cutting down costs through better management, thus increasing both wages and profits. Thus the old enmity of the employer towards his natural enemy, the employee (I think this has been a much more prevalent enmity than that of the employee toward the employer) has been increasingly disappearing. The real enemy of the employer is seen to be waste in management—in short, stupidity. This, and not the rising wages of the employees, is what, in the main, makes costs mount. Thus ground has been increasingly given for a new attitude, namely that of regarding the worker as finely and indispensably necessary to the success of the enterprise.

The trends above mentioned are of the utmost psychological and social significance. They do not indeed indicate that business men have become saints. Far from it. They do, however, show rather conclusively that the conditions of business are no longer as barbarous as they used to be. They are no longer as inimical as they formerly were to the growth of the finer attitudes. We need no longer say with the classical economists that in spite of man's self-interest, nay, by reason of it, the good of society will be incidentally achieved. We know of course that that has been so. The very eagerness of a man to make money for himself by putting goods on the market has most often been for the benefit of society. To this extent the classical economists were quite right. But those benefits have, in the past, been bought at a most disastrous spiritual cost. Men have lived their lives in the crassest kind of vulgar self-seeking; have indulged in all sorts of dishonest strategies; have robbed and ruined each other in the name of high finance. All that the classical economists could say to this was, in effect, that God (the God of business) moves in a mysterious way his wonders to perform!

> If all you business gentlemen will only be sincere,
> In concentrating hard upon your greediness and gall;

The God who rules with majesty this economic sphere
Will sanctify your vices into blessings for us all!

To-day, however, it is more possible for a man with the ideals of integrity and public service to make good in business *for the simple reason that business today is more and more placing a premium upon these attitudes.*

Let us go back then to our second question: If we could, would we not prefer the economic philosophy which permitted us the luxury of respecting ourselves? Of course we would. But, as we have seen, business techniques have been developing which do, within limits, permit us that luxury. Hence we are inclined to infer that business men in small perhaps, but in increasing numbers, are finding a keen pleasure in a new type of motivation, the motivation which places money-making second to the motive of self-respecting craftsmanship in the great art of producing and distributing worthwhile goods of life. The business man, in short, is beginning to learn the joy of the artist in his work.

In strong support of these new possibilities are the economic developments noted in the last chapter: (1) the increasing introduction of science into business, with the consequent growth of a new habit of looking into the farthest consequences of transactions (most cruelty in human relations, as a matter of fact, comes simply from stupidity, which itself comes from a lack of imagination); (2) the growing elimination of waste, with the consequent strengthening of the conviction that valueless or adulterated or misrepresented goods have no excuse for being: (3) the increasing partnership of employer and employee, opening the opportunity for the development of a finer human relationship; (4) an increasing sense of responsibility for misfortunes accruing to the operating personnel, permitting the growth of a new habit of personal concern even in the impersonality of our vast enterprises; (5) the slight beginnings of a more equitable sharing, opening up new vistas of social and economic justice; (6) a conviction that business can really succeed only on the basis of proving itself worth while to the consuming public.

The philosopher Kant says, in effect, that if you tell a man that he ought to do something, you must presuppose that he can do it. To tell a young lad stricken with tuberculosis that he ought to support

his aged mother and three sisters is to set oneself down a moral fool. Much of our preachment to business men has, I think, been in this vein. On the other hand, much of the willingness of business men to excuse their shady transactions and their lower motives, has resulted from their assumption that no other ways were successfully open to business men. I think our analysis of the developments in business enterprise should scotch this self-excusing belief. Business has increasingly become a sphere in which men of integrity and a spirit of public service can find scope for their interests. Business, in short, in beginning to give opportunity at least for motives of scientific-mindedness, serviceableness and fine human relationships is on the way to becoming one of the professions.

Can business really become a profession? There is every reason to believe that it can. It has in it (1) all the possibilities of indispensable serviceableness. It has in it (2) all the complexity of structure and process, and all those possibilities for good or bad performance which make the enlistment of highly trained intelligence necessary. It is therefore a worthy field (1) for a person with a real intelligence; (2) for one with a pro-social attitude. There are a few persons in business to-day who possess both these qualifications. For them, business is already an honorable profession. They find in it, to be sure, a very great deal that is to be deplored. But so do physicians to-day find even in their highly ethicized profession much that is to be deplored—the splitting of fees, for example. I think we may, with a fair degree of confidence, look forward to the time when business will possess just as high a code of ethics as law, medicine or teaching; when the spirit of serviceableness will be just as prominent as in these; when finally, we shall look forward to the day when the outstanding pride of its members will be the artist's and the craftsman's pride in an enterprise well conducted, a work well done.

Doubtless we are only at the small beginnings of this. But such inquiries as you, a body of business men, have been making this year, under the direction of a Bureau devoted to the more efficient and more civilized organization of business—such inquiries as these, together with the answers given by scientist, engineer and business man are indication that the old buccaneering days of business are drawing to a close and that, despite all the hard things we still have to say of it, business is gradually preparing itself to enter into the fine family of professions.

SELECTED READING LIST

Alexander, Samuel: Moral Order and Progress: An Analysis of Ethical Conceptions. London (Truebner and Co.), 1889.

Allport, F. H.: Social Psychology. Boston (Houghton Mifflin Co.), 1924.

Baldwin, Stanley: Peace and Goodwill in Industry. London (George Allen and Unwin, Ltd.), March, 1925.

Berriman, A. E., et al.: Industrial Administration: A series of lectures. Manchester (University Press), 1920.

Brookings, R. S.: Industrial Ownership: Its Economic and Social Significance. New York (Macmillan Co.), 1925.

Burns, C. Delisle: Industry and Civilization. New York (Macmillan Co.), 1925.

Burns, C. Delisle: Government and Industry. London (George Allen and Unwin, Ltd.), 1921.

Carver, Thomas Nixon: The Economy of Human Energy. New York (Macmillan Co.), 1924.

Carver, Thomas Nixon: Essays on Social Justice. Cambridge (Harvard University Press), 1915.

Carver, Thomas Nixon: The Present Economic Revolution in the United States. Boston (Little Brown and Co.), 1925.

Carver, Thomas Nixon, and Hall, H. B.: Human Relations: An Introduction to Sociology. Boston (D. C. Heath), 1923.

Commons, John R.: Industrial Goodwill. New York (McGraw-Hill Book Co., Inc.), 1919.

Commons, John R., et al.: Industrial Government. New York (Macmillan Co.), 1921.

Copley, F. B.: Frederick W. Taylor: Father of Scientific Management. New York (Harper and Bros.), 1923.

Craig, D. R., and Charters, W. W.: Personal Leadership in Industry. New York (McGraw-Hill Book Co., Inc.), 1925.

De Tocqueville, A.: Democracy in America. New York (Century Co.), 1898.

Dewey, John: Human Nature and Conduct. New York (Henry Holt and Co.), 1922.

Dugdale, R. L.: The Jukes: A Study in Crime, Pauperism, Disease and Heredity. New York (G. P. Putnam's Sons), 1877.

Estabrook, A. H.: The Jukes in 1915. Washington (Carnegie Institute of Washington), 1916.

Feldman, H.: The Regularization of Employment. New York (Harper and Bros.), 1925.

FELDMAN, H.: Outstanding Features of Dennison Management. *Industrial Management.* New York, August-October, 1922, v. 64, p. 67–73; 145–150; 225–230.

FILENE, A. E.: The Way Out: A Forecast of Coming Changes in American Business and Industry. New York (Doubleday, Page and Co.), 1924.

FOLLETT, M. P.: Creative Experience. New York (Longmans, Green and Co.), 1924.

FOLLETT, M. P.: New State: Group Organization the Solution of Popular Government. New York (Longmans, Green and Co.), 1918.

GOODRICH, C. L.: The Frontier of Control: A Study of British Workshop Politics. New York (Harcourt, Brace and Co.), 1921.

GODDARD, H. H.: The Kallikak Family: A Study in the Heredity of Feeblemindedness. New York (Macmillan Co.), 1912.

HEERMANCE E. L.: Codes of Ethics. Burlington, Vt. (Free Press Printing Co.), 1924.

HOBHOUSE, L. T.: The Elements of Social Justice. New York (Henry Holt Co.), 1922.

HOBHOUSE, L. T.: Social Development: Its Nature and Conditions. New York (Henry Holt Co.), 1924.

HOLT, E. B.: The Freudian Wish and Its Place in Ethics. New York (Henry Hall and Co.), 1915.

HUMPHREY, G.: The Story of Man's Mind. Boston (Small, Maynard and Co.), 1923.

HUNT, E. E., *comp.*, Scientific Management since Taylor. New York (McGraw-Hill Book Co., Inc.), 1924.

HUNT, E. E. WILLITS, JOSEPH H., AND TRYON, F. G.: What the Coal Commission Found. Baltimore (The Williams & Wilkins Co.), 1925.

JESSUP, H. W.: The Professional Ideals of a Lawyer: A Study of Legal Ethics. New York (Jennings Co., Inc.), 1925.

KALLEM, H. M.: Education: The Machine and the Worker: An Essay on the Psychology of Education in Industrial Society. New York (New Republic), 1925.

LAIRD, D. R.: Psychology of Selecting Men. New York (McGraw-Hill Book Co., Inc.), 1925.

LANSBURGH, RICHARD H.: Industrial Management. New York (John Wiley and Sons, Inc.), 1923.

LEWIS, JOHN L.: The Miners' Fight for American Standards. Indianapolis (Bell Publishing Co.), 1925.

LINDEMAN, E. C.: Social Discovery: An Approach to the Study of Functional Groups. New York (Republic Publishing Co.), 1924.

METCALF, H. C., *ed.*: Linking Science and Industry. Baltimore (The Williams & Wilkins Co.), 1925.

MUIR, RAMSEY: The New Liberalism. London (Daily News, Ltd.), 1923.

Muscio, B., *ed.:* Lectures on Industrial Administration. London (Sir Isaac Pitman and Sons, Ltd.), 1920.

National Conference on the Christian Way of Life: And Who Is My Neighbor: An Outline for the Study of Race Relations in America. (Association Press), 1924.

Rowntree, B. S.: The Human Factor in Business. New York (Longmans, Green and Co.), 1921.

Schell, E. H.: The Technique of Executive Control. New York (McGraw-Hill Book Co., Inc.), 1924.

Sheldon, Oliver: The Philosophy of Management. London (Sir Isaac Pitman and Sons, Ltd.), 1923.

Tawney, R. H.: The Acquisitive Society. New York (Harcourt, Brace and Howe), 1920.

Taylor, A. E.: The Problem of Conduct. New York (Macmillan Co.), 1901. (out of print).

Taylor, Frederick W.: The Principles of Scientific Management. New York (Harper and Bros.), 1911.

Tead, O., and Metcalf, H. C.: Personnel Administration: Its Principles and Practice. New York (McGraw-Hill Book Co., Inc.), 1920.

Thomas, F.: The Environmental Basis of Society: A Study in the History of Sociological Theory. New York (Century Co.), 1925.

Tugwell, R. G., et al.: American Economic Life and the Means of Its Improvement. New York (Columbia University), 1925.

Tugwell, R. G., *ed.:* The Trend of Economics. New York (Alfred A. Knopf), 1924.

Veblen, Thorstein: Absentee Ownership and Business Enterprise in Recent Times: The Case of America. New York (B. W. Huebsch, Inc.), 1923.

Veblen, Thorstein: The Place of Science in Modern Civilisation and Other Essays. New York (B. W. Huebsch, Inc.), 1919.

Webb, S. and B.: The Decay of Capitalist Civilization. New York (Harcourt, Brace and Co.), 1923.

Wiggam, A. E.: The New Decalogue of Science. Indianapolis (Bobbs-Merrill Co.), 1923.

Williams, Whiting: What's on the Worker's Mind: By One Who Put on Overalls to Find Out. New York (Charles Scribner's Sons), 1920.

Wilson, R. M.: The Care of Human Machinery. London (Frowde, Hodder and Stoughton), 1921.

Winship, A. E.: Jukes—Edwards: A Study in Heredity. Harrisburg (R. C. Myers and Co.), 1900.

Wolfe, A. B.: Conservatism, Radicalism and Scientific Method: An Essay on Social Attitudes. New York (Macmillan Co.), 1923.

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